DURATRAX®

VENDETTA™ TC

ASSEMBLY AND OPERATION MANUAL

www.duratrax.com

ITEMS INCLUDED

The following items are included with your Vendetta TC.

- *Chassis*
- *Body*
- *Transmitter*
- *Transmitter Antenna*
- *Receiver Antenna Tube*
- *Decal Sheet*
- *Instruction Manual*
- *Exploded View/Parts Listing*
- *Transmitter Frequency Flag*

YOU WILL NEED

BATTERY ADAPTER (FOR CHARGING) DTXC2210

6-CELL 1200 MAH NIMH BATTERY DTXC2194

ONYX™ 220 CHARGER DTXP4220

THINGS TO KNOW

SAFETY PRECAUTIONS

When these safety precautions are followed, the Vendetta TC will provide years of enjoyment. Use care and good sense at all times when operating this radio controlled car. Failure to use this vehicle in a safe, sensible manner can result in injury or damage to property. You and you alone must insure that the instructions are carefully followed and all safety precautions are obeyed.

- Do not operate the Vendetta TC near people. Spectators should be behind the driver or at a safe distance away from the vehicle.
- Make sure to read the instructions with the battery and charger before charging.
- Do not leave any charger unattended during charging. If the battery or charger become hot at any time, disconnect the battery from the charger immediately! Failure to do so may cause permanent damage to the charger and battery and may cause bodily harm.
- Do not cover the air intake holes on the charger during charging. This may cause the charger to overheat.
- Do not allow the electronic speed control (ESC) or radio equipment to come into contact with moisture. Water can cause the electronics to short out and can cause permanent damage.
- Always turn on the transmitter before turning on the electronic speed control.
- Before turning on your radio, check to make sure that no one else is running on the same frequency as your Vendetta TC.

HELPFUL HINTS

- Avoid working over a deep pile carpet. If you drop a small part or screw, it may be difficult to find.
- Place a mat or towel over your work area. This will prevent parts from rolling off and will protect the work surface.
- Avoid running the car in cold weather. The plastic and metal parts can become brittle at low temperatures. In addition, grease and oil become thick, causing premature wear and poor performance.
- Test fit all parts before attaching them permanently.

SPECIFICATION AND DESCRIPTION CHANGES

All pictures, descriptions and specifications found in this instruction manual are subject to change without notice. DuraTrax maintains no responsibility for inadvertent errors in this manual. Visit **www.duratrax.com** for the latest updates and information for your model.

WARRANTY

- DuraTrax® guarantees this kit to be free from defects in both material and workmanship at the date of purchase. DuraTrax will warranty this kit for 90 days after the purchase date. DuraTrax will repair or replace, at no charge, the incorrectly made part.
- Make sure you save the receipt or invoice you were given when you bought your model! It is your proof of purchase and we must see it before we can honor the warranty. Further, DuraTrax reserves the right to change or modify this warranty without notice.
- In that DuraTrax has no control over the final user assembly or material used for final user assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

To return your Vendetta TC for repairs covered under warranty, you should send your car to:

Hobby Services
3002 N. Apollo Drive Suite 1
Champaign, Illinois 61822
Attn: Service Department
Phone: (217) 398-0007 9:00 am-5:00 pm
Central Time M-F
E-mail: hobbyservices@hobbico.com
www.hobbyservices.com

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

STRESS-TECH™ PARTS GUARANTEE

We have engineered the Vendetta TC to take the rough and tumble abuse that makes R/C fun. We are so confident of the quality and durability of the Stress-Tech plastic parts that we will replace any Stress-Tech plastic part you break during the first 12 months you own the car. Just send in the part to us and we will send you a FREE replacement. Please see the Vendetta TC parts list for the items covered under the Stress-Tech guarantee.

To receive your free replacement part please send the following to the Hobby Services address listed under the warranty on the left.

❏ 1. The broken part must be included.

❏ 2. The part number and description of the broken part.

❏ 3. Copy of your dated invoice or purchase receipt.

❏ 4. Your name, phone number and shipping address.

REPAIR SERVICE

Repair service is available anytime.

- After the 90 day warranty, you can still have your Vendetta TC repaired for a small charge by the experts at DuraTrax's authorized repair facility, Hobby Services.
- To speed up the repair process, please follow the instructions listed below.

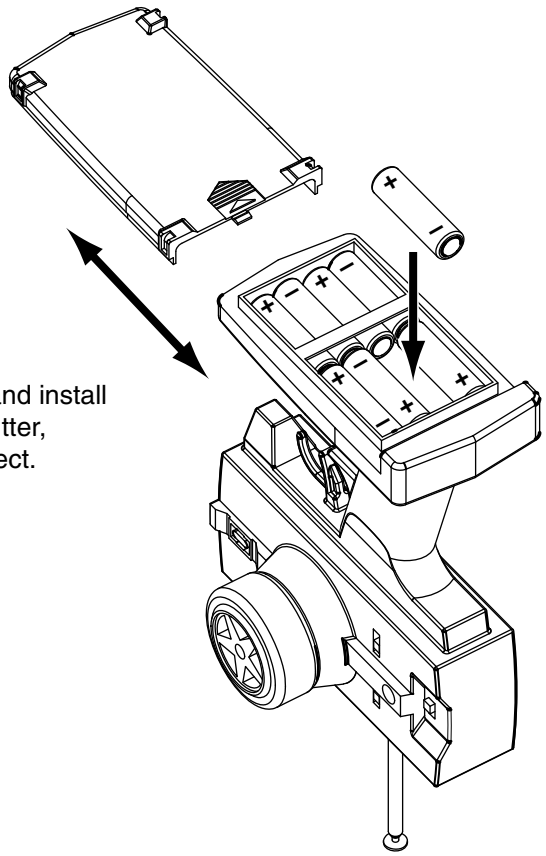
❏ 1. Under most circumstances return the ENTIRE vehicle. The exception would be sending in a Stress-Tech part. See the instruction under the Stress-Tech Guarantee.

❏ 2. Make sure the transmitter is turned off, and all of the batteries are removed.

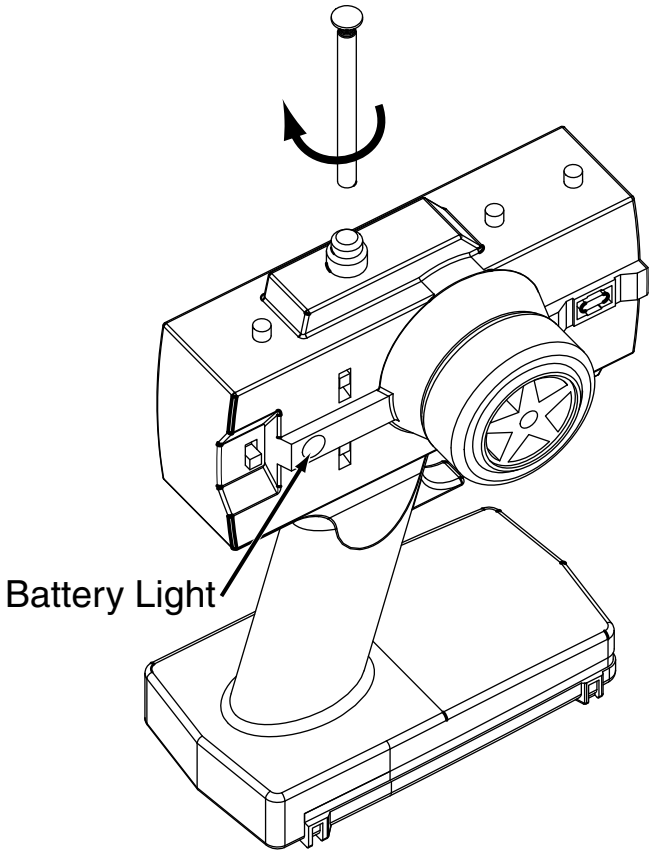
❏ 3. Send written instructions which include: a list of all items returned, a THOROUGH explanation of the problem, the service needed and your phone number during the day. If you expect the repair to be covered under warranty, be sure to include a proof of date of purchase (your store receipt or purchase invoice).

FINISHING
THE VENDETTA TC

TRANSMITTER PREPARATION



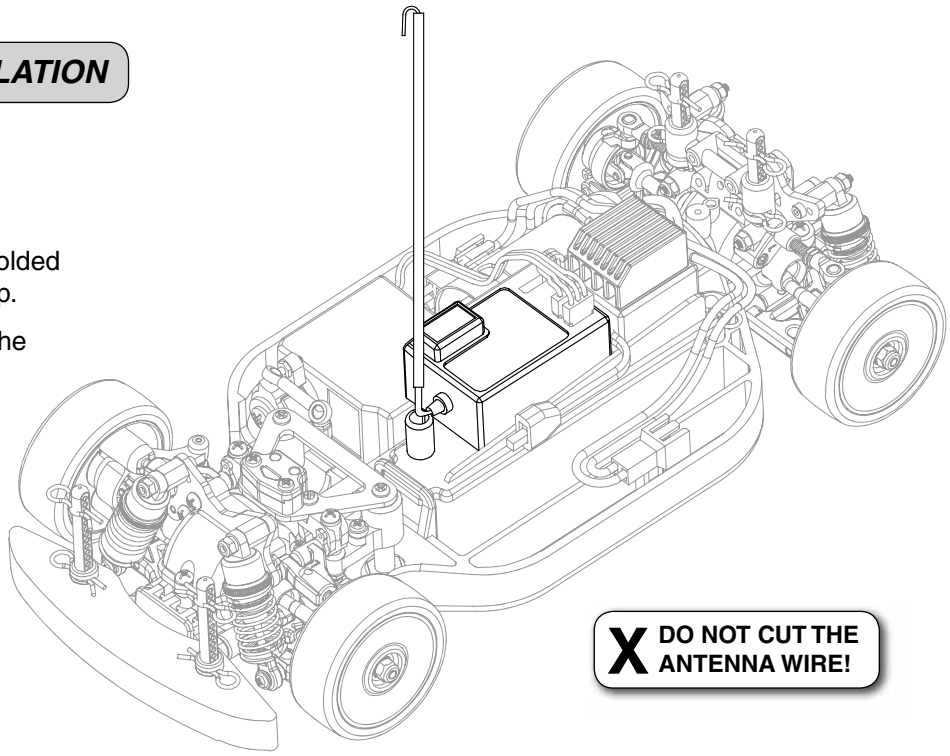
- Slide the batttery tray door off and install eight “AA” batteries into transmitter, making sure the polarity is correct.



- Install the antenna.
- Raise the antenna at the top of the transmitter.
- Turn the transmitter on and check the battery light. If the red light glows steadily, the batteries have enough voltage. If the red light blinks, the batteries are low and should be replaced.

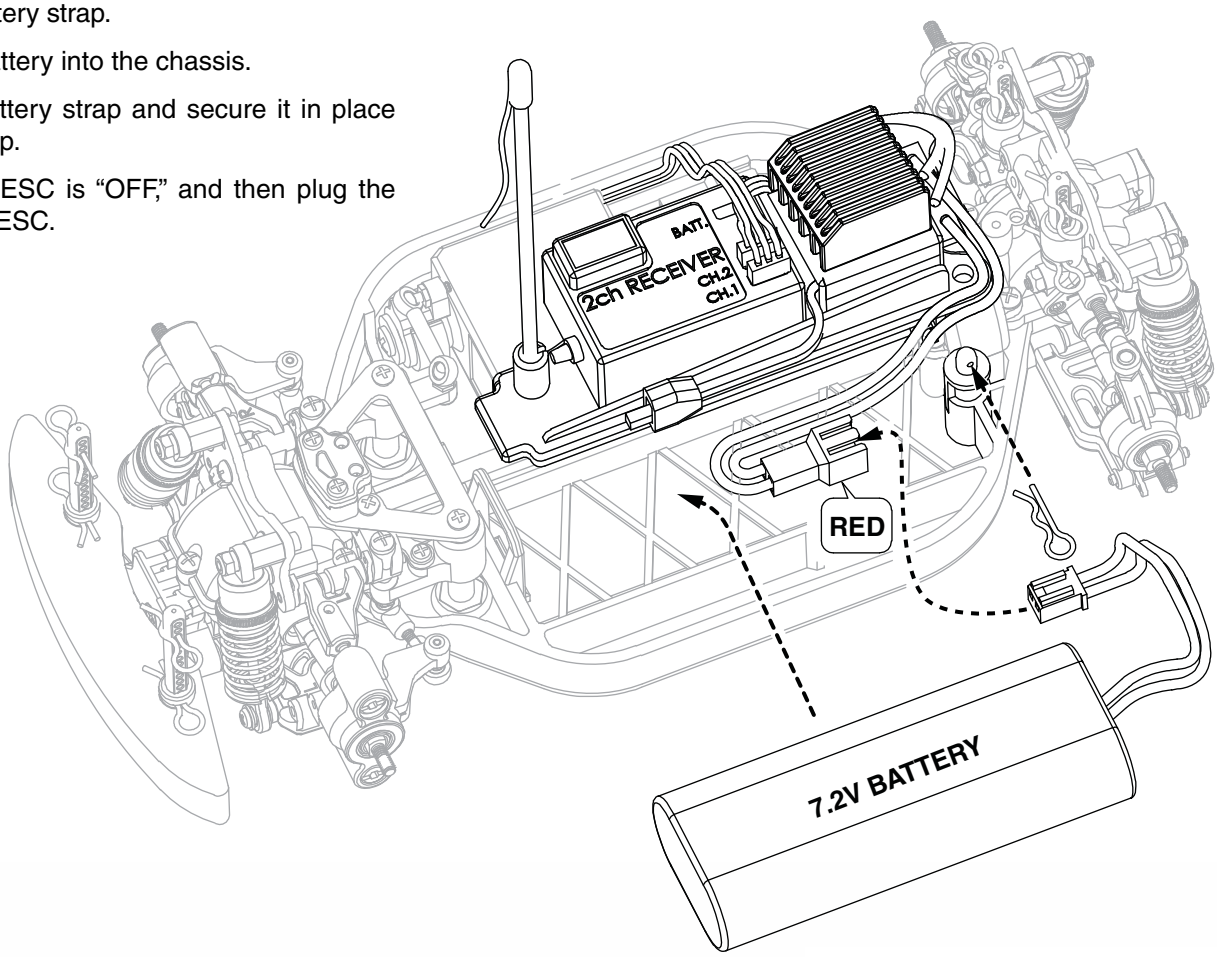
RECEIVER ANTENNA INSTALLATION

- Route the receiver antenna wire through the receiver antenna tube.
- Insert the antenna tube into the molded antenna mount on the battery strap.
- Install the antenna tube cap onto the top of the antenna tube.
- DO NOT cut or coil the receiver antenna wire.

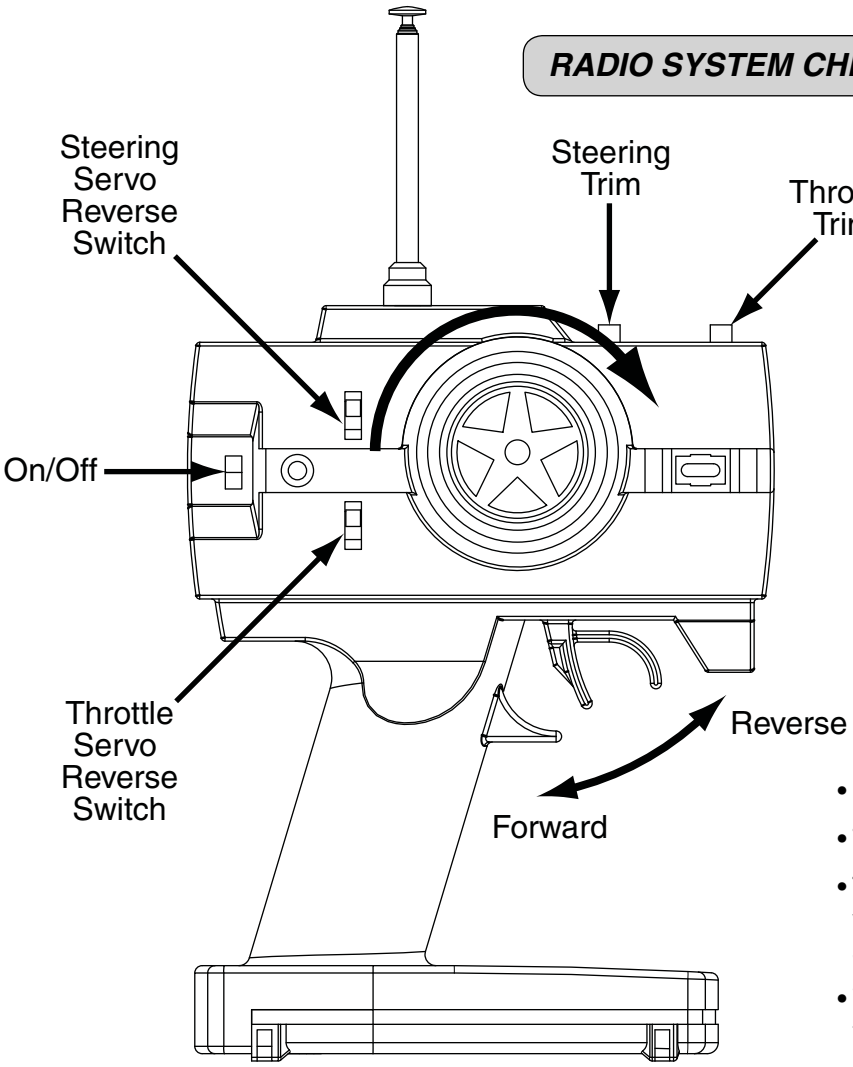


6-CELL BATTERY INSTALLATION

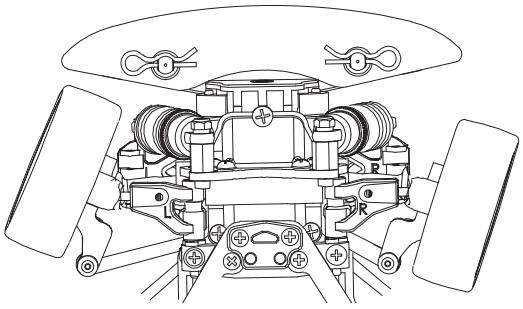
- Remove the body clip from the battery strap post.
- Remove the battery strap.
- Install a 7.2V battery into the chassis.
- Reinstall the battery strap and secure it in place with the body clip.
- Check that the ESC is “OFF,” and then plug the battery into the ESC.



RADIO SYSTEM CHECK



! ALWAYS CHECK THE RADIO OPERATION *BEFORE* EACH RUN

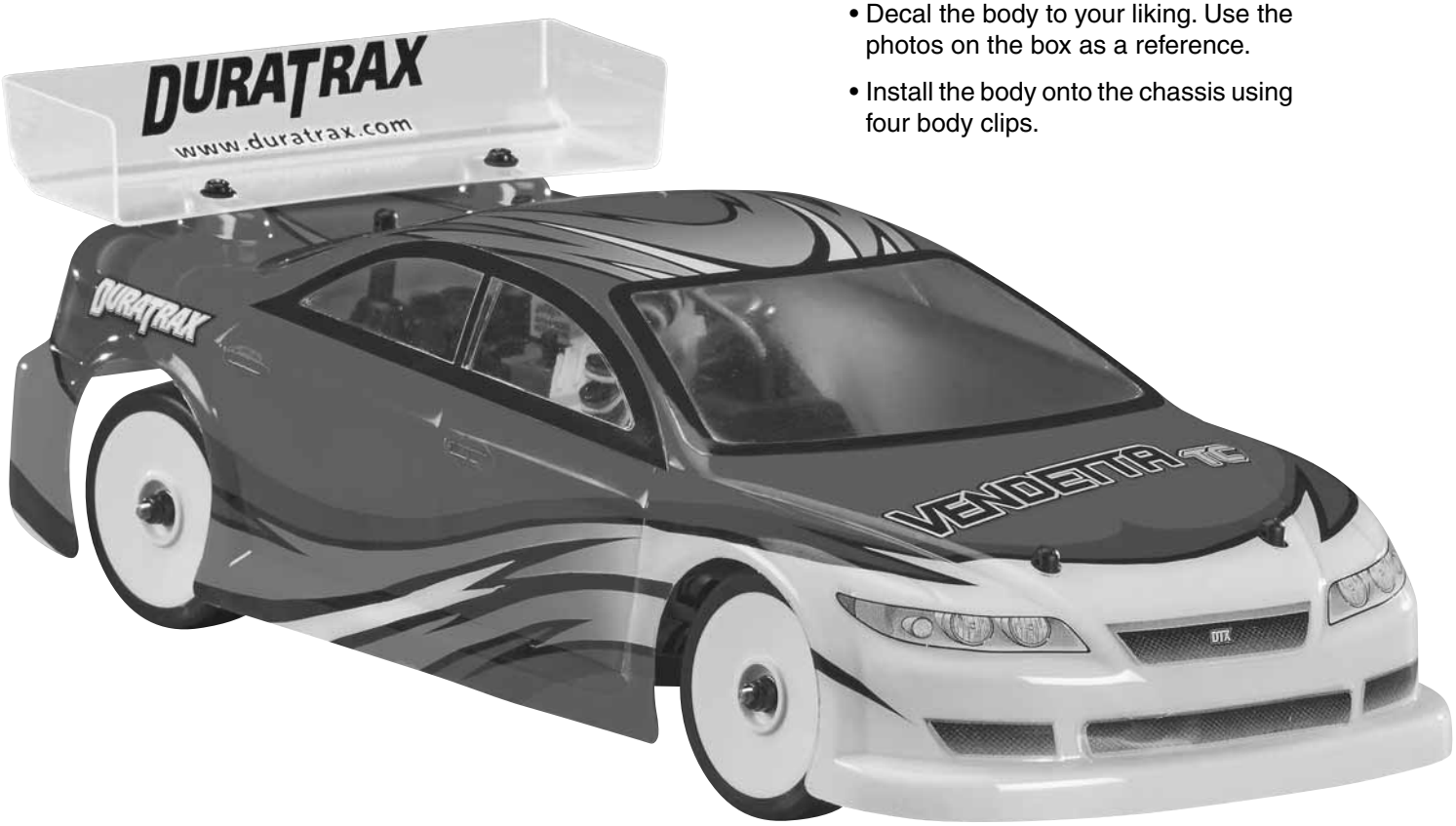


- Raise the antenna.
- Turn the transmitter on. Then turn the receiver on.
- Turn the transmitter wheel to the right—the front wheels should turn to the right. If not, move the steering servo reverse switch.
- When running, adjust the steering trim so the car tracks straight.
- Gently pull back on the throttle trigger. The Vendetta TC should slowly move forward. If the car goes in reverse, move the throttle reversing switch on the transmitter. The throttle trim knob may also need to be adjusted to find neutral.

SPEED CONTROL SET UP

- The Vendetta TC ESC is an auto-set ESC.
- Lift the chassis off the ground during the ESC set up.
- Center the throttle trim knob on the transmitter.
- Connect the battery pack to the ESC. Turn on the Tx, and then the ESC.
- Wait 2 seconds and then quickly pull the trigger to full throttle and release.
- The ESC is now set up.

BODY INSTALLATION



- Decal the body to your liking. Use the photos on the box as a reference.
- Install the body onto the chassis using four body clips.

MAINTENANCE TIPS

BEFORE EACH RUN

- IMPORTANT: Check to make sure that all screws are tight. Always use threadlock (DTXR2010) on screws going into metal.
- Before running always check the condition of your radio system batteries and replace/recharge if necessary.
- Check to make sure that all of the moving parts of the Vendetta TC move freely and do not bind.
- Before running, turn on the radio and make sure the servos move easily and in the proper direction.
- Check for any broken or damaged parts. Replace them before running the Vendetta TC. Running the Vendetta TC with broken or damaged parts could damage additional parts.
- Check to make sure that all wires are properly connected.
- Check that the ESC and receiver are properly secured to the chassis.

AFTER EACH RUN

- Clean any debris from the chassis and moving parts.
- Check for any broken or damaged parts. Replace them before the next run.
- Disconnect and remove the battery from the chassis.

AFTER EVERY 10 RUNS

- Check to make sure that the bearings are free of dirt and debris, and roll smoothly.
- Check the shocks for oil leakage. Inspect the shaft and O-rings for wear and damage. Replace if necessary. (A shock shaft with scratches you can feel with a fingernail should be replaced.)
- Check the tires to make sure they are still properly glued to the wheels.

TUNING GUIDE

When tuning the Vendetta TC make sure that you have equal lengths from one side to the other on the shocks, upper rods, and front pivot ball knuckles. Also, make sure to have the shock pre-load adjusters at the same setting from left to right. They do not have to be the same front to rear.

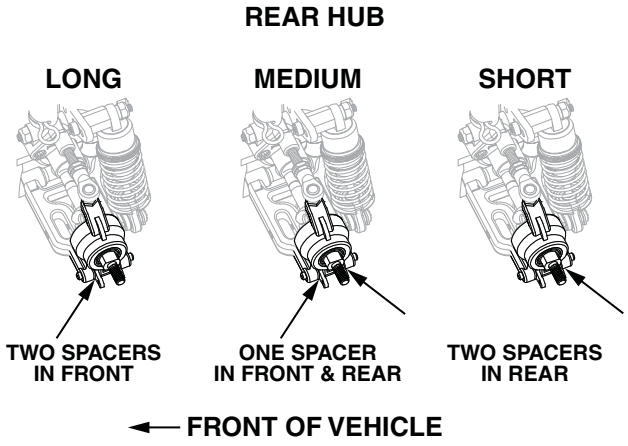
RIDE HEIGHT ADJUSTMENT

The ride height of the Vendetta TC is easily adjusted by using the threaded pre-load collars. To increase the ride height of the Vendetta TC, increase the pre-load on the shock springs by turning the threaded collars. Make sure you have the same pre-load from side to side. You can do this by counting the number of turns of the collar or by measuring the gap between the top of the collar and the shock cap. To lower the ride height, decrease the pre-load on the shock springs. Tip: Rough, bumpy parking lot surfaces require higher ride height; flat, smooth, or high traction surfaces allow a lower ride height.

PINIONS

The Vendetta TC comes stock with the 20 tooth pinion. To obtain higher top speeds you can install a larger pinion gear onto the motor. This will, however, decrease your acceleration and run time. **TIP:** Smaller pinion equals more torque, less top speed. Larger pinion equals more top speed, less torque.

WHEELBASE

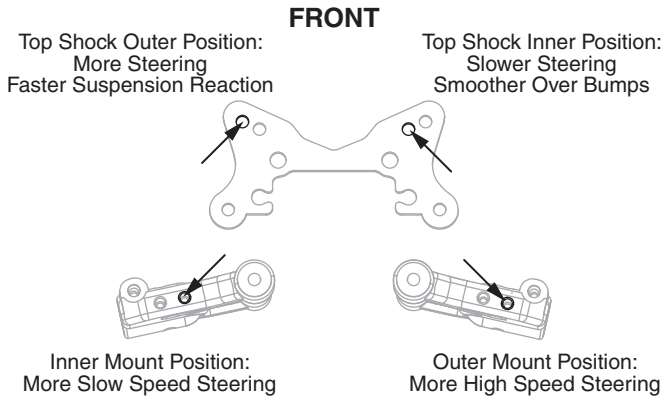


The rear wheelbase is adjustable on the Vendetta TC. You can do this by placing the adjuster clips in front of or behind the rear hub carrier. A shorter wheelbase will provide more steering, while a longer wheelbase will be more stable. The Vendetta TC comes stock with the hub carrier in the middle.

SHOCK SPRINGS

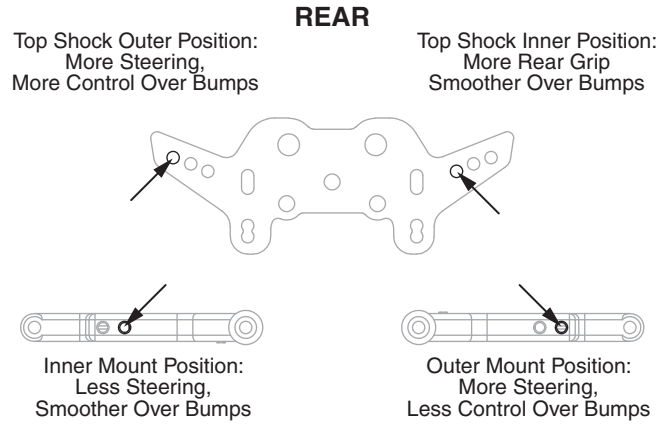
The Vendetta TC comes stock with medium springs (yellow, DTXC8952). For low traction or bumpy tracks, a soft spring should be used (White, DTXC8953). For high traction or smooth tracks, a firm spring should be used (Green, DTXC8954).

FRONT SHOCK ADJUSTMENT

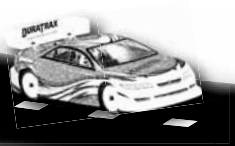


Moving the tops of the shocks out will increase steering reaction but decrease front traction. Moving the tops of the shocks in will result in slower steering reaction but will be smoother over bumps and have more front traction. Mounting the bottom of the shocks in the inside hole will give more front traction but slower steering reaction. Mounting the bottom of the shocks in the outside hole will give less front traction but increase steering reaction. The lower mounting point is for major adjustments and the top mounting point is for minor adjustments.

REAR SHOCK ADJUSTMENT



Moving the tops of the shocks out will increase steering reaction and decrease rear traction. Moving the tops of the shocks in will result in slower steering reaction but will be smoother over bumps and have more rear traction. Mounting the bottom of the shocks in the inside hole will give more rear traction. Mounting the bottom of the shocks in the outside hole will give less rear traction and increase steering reaction. The more angled the rear shock is, the more side grip. The more vertical the rear shock is, the less side grip. The lower mounting point is for major adjustments and the top mounting point is for minor adjustments.



SHOCK OIL
The Vendetta TC comes stock with 30 weight oil in the shocks. The handling of the car can be tuned by changing the shock oil to either heavier (bigger number) or lighter (smaller number). By putting heavier oil in the shocks, the car will have less chassis roll and become more responsive. Putting lighter oil in the shocks will cause the car to be less responsive and have more chassis roll. For smooth, high traction surfaces, a thicker oil would be best. For low traction or bumpy surfaces, a lighter oil would be best.

FRONT TRACK WIDTH
The Vendetta TC has adjustable front track width due to its pivot ball knuckle design. To decrease track width, screw the upper and lower pivot balls in equally. To increase track width, screw the upper and lower pivot balls out equally. Make sure to have both sides the same distance from the end of the upper and lower arms. You can check this by measuring from the end of the upper and lower arm to the outside of the knuckle. Track width affects the car's handling and steering response. Wider front track width decreases steering reaction and front grip. Narrow front track width increases steering reaction and front grip.

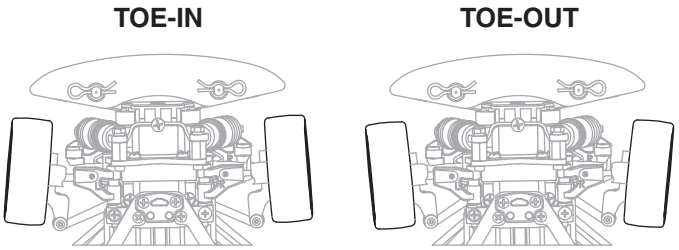
DROOP
The Vendetta TC has adjustable front and rear droop (or chassis up travel). Droop is the distance the chassis lifts from ride height until the wheels come off the ground. Droop is another way to control the weight transfer of the chassis besides shock oil and springs. To reduce the amount of front or rear droop, screw in the droop screws on the upper arms. To increase the amount of front or rear droop, screw out the droop screws on the upper arms. Make sure both sides are set equally. You can check this by setting the chassis with the wheels off on a flat board. Measure from the board to the top of the axle on each side.

More front droop increases chassis up travel on-throttle, decreases high-speed steering, and is better on bumpy tracks. Less front droop decreases chassis up travel on-throttle, increases high-speed steering, and is better on smooth tracks.

More rear droop increases chassis up travel off-throttle or under braking, increases steering in slow corners, and is better on bumpy tracks. Less rear droop decreases chassis up travel off-throttle or under braking, increases stability under braking, and is better on smooth tracks.

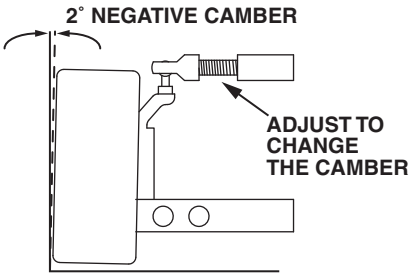
Typically you have more droop in the rear than the front. For smooth, high traction surfaces, less droop overall would be best. For low traction or bumpy surfaces, more droop overall would be best.

TOE-IN AND TOE-OUT



Toe-in is when the fronts of the tires point towards each other. Toe-out is when the fronts of the tires point away from each other. Toe-in increases stability during acceleration and high speed. However, toe-in also decreases steering when entering a corner. Toe-out will increase steering into corners, but will decrease the overall stability during acceleration. The front typically is set up with 0° to 1° of toe-in.

CAMBER



Camber refers to the angle at which the tire and wheel ride in relation to the ground when viewed from the front or rear. Negative camber is when the wheels lean inward and positive camber is when the wheels lean outward. Usually adding a small amount of negative camber (0° to -2°) will increase traction. However, adding too much camber will decrease traction. The objective is to keep as much of the tire as possible in contact with the running surface. Never put in positive camber. Make sure that both sides are equal.

Use the DuraTrax Pit Tech™ Camber Gauge (DTXR1145) to accurately set up your Vendetta TC.

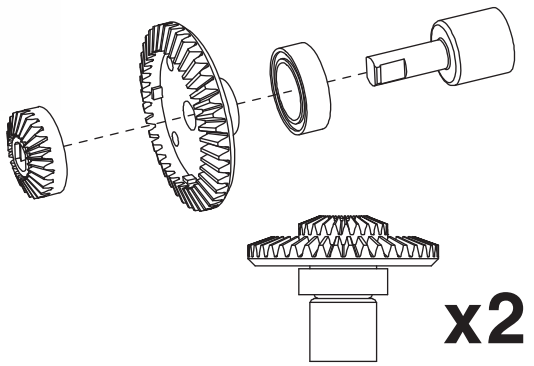
CASTER
The Vendetta ST has adjustable caster. Caster refers to the vertical angle of suspension. By placing the adjuster clip behind the fron upper arm, you decrease caster angle. This will give more initial turn-in but decrease on-power steering and straight line stability.

Placing the adjuster clips in front of the front upper arm increases the caster. This will increase on-power steering and straight line stability, but reduce initial turn-in.

MAINTENANCE GUIDE

The following section is provided to help you with maintenance and repairs to your Vendetta TC.

Gear Differential
For Front & Rear



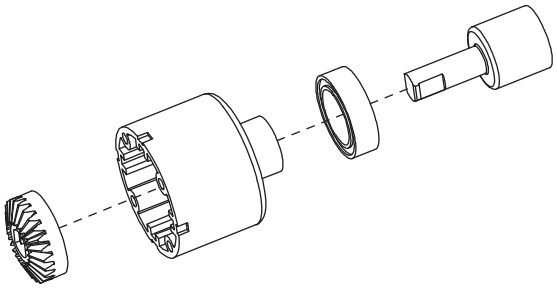
x2

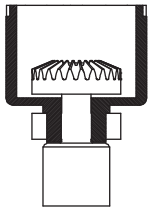
1

.....2
8x12mm Ball Bearing

2

.....2
8x12mm Ball Bearing



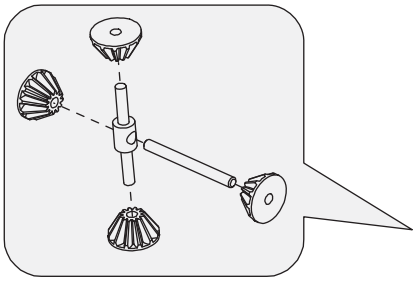


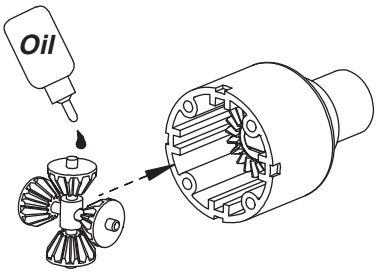
x2

3

.....2
1.5x16mm Pin

.....2
1.5x16mm Shaft

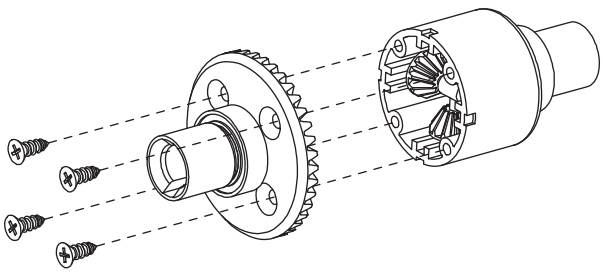


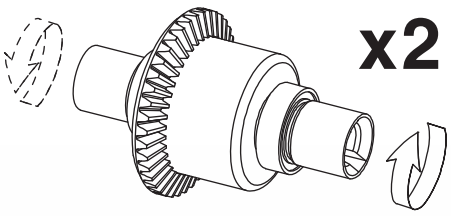


x2

4

.....8
2x6mm S/T Screw





x2

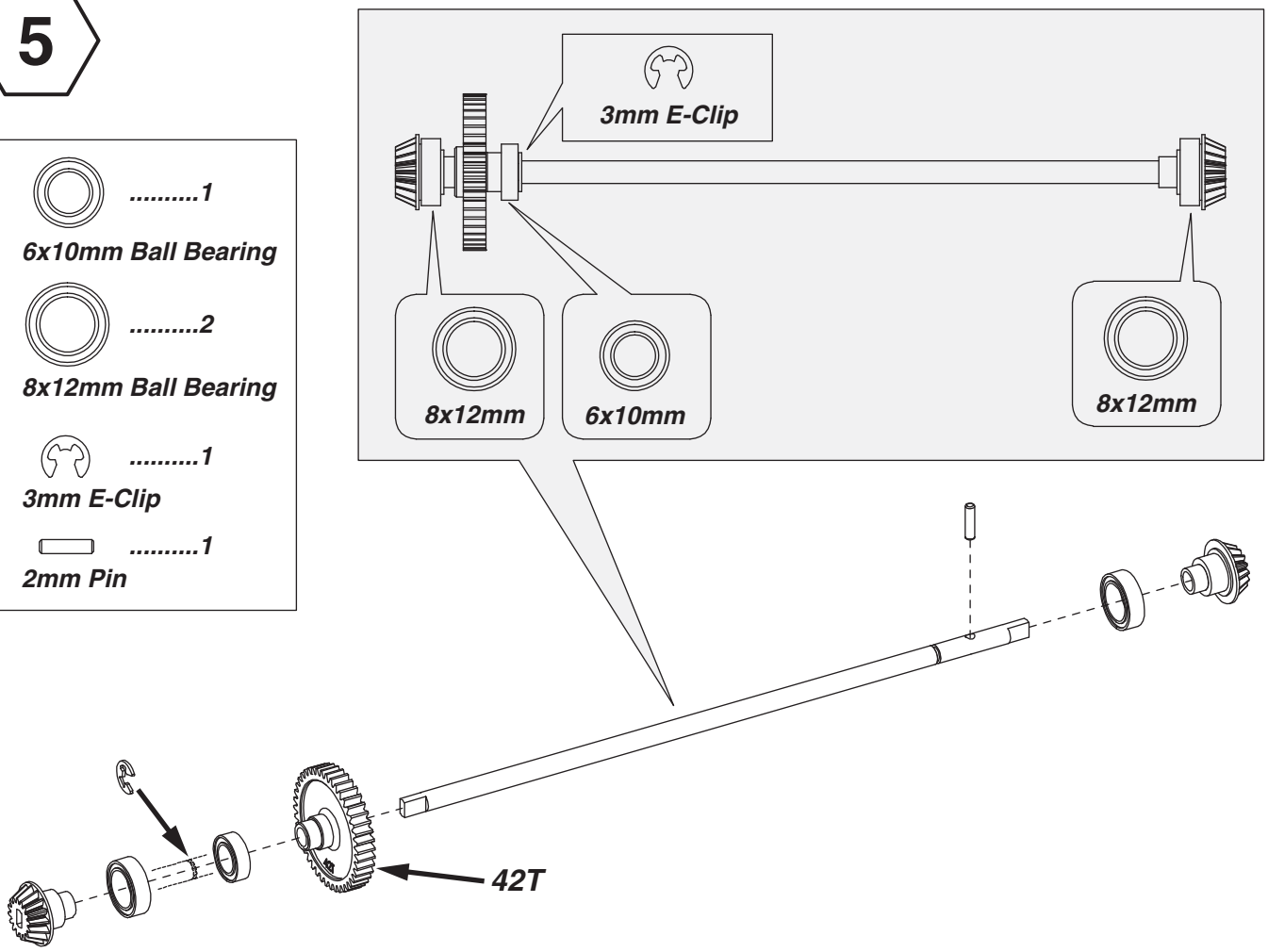
5

.....1
6x10mm Ball Bearing

.....2
8x12mm Ball Bearing

.....1
3mm E-Clip

.....1
2mm Pin



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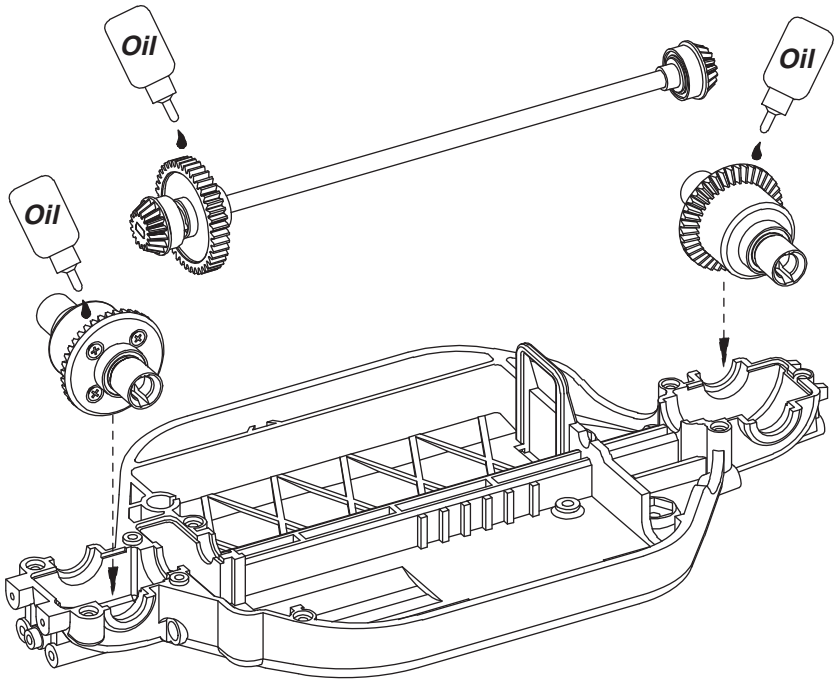
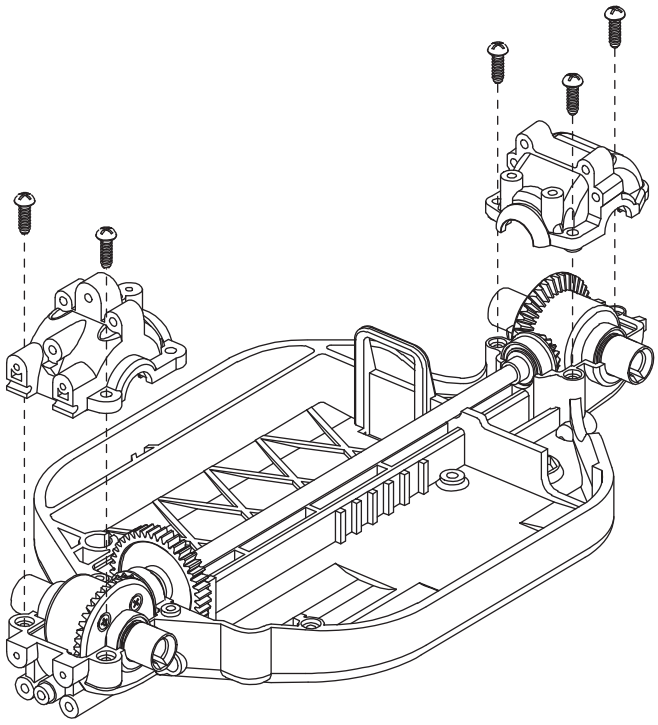


7

.....1

2.6x8mm S/T Screw

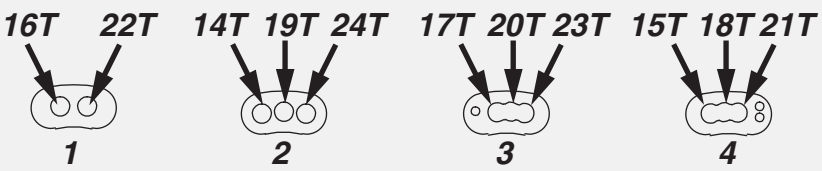


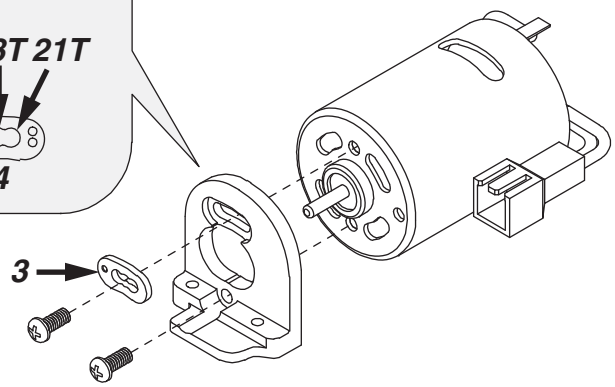
8

.....2

2.6x6mm Screw

When using optional pinion gears, adjust the motor position by using the insert that matches the pinion size.



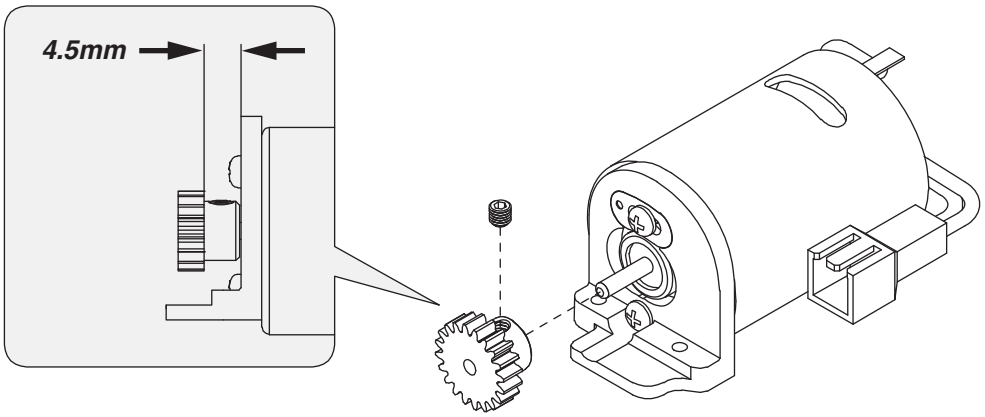


9

.....1

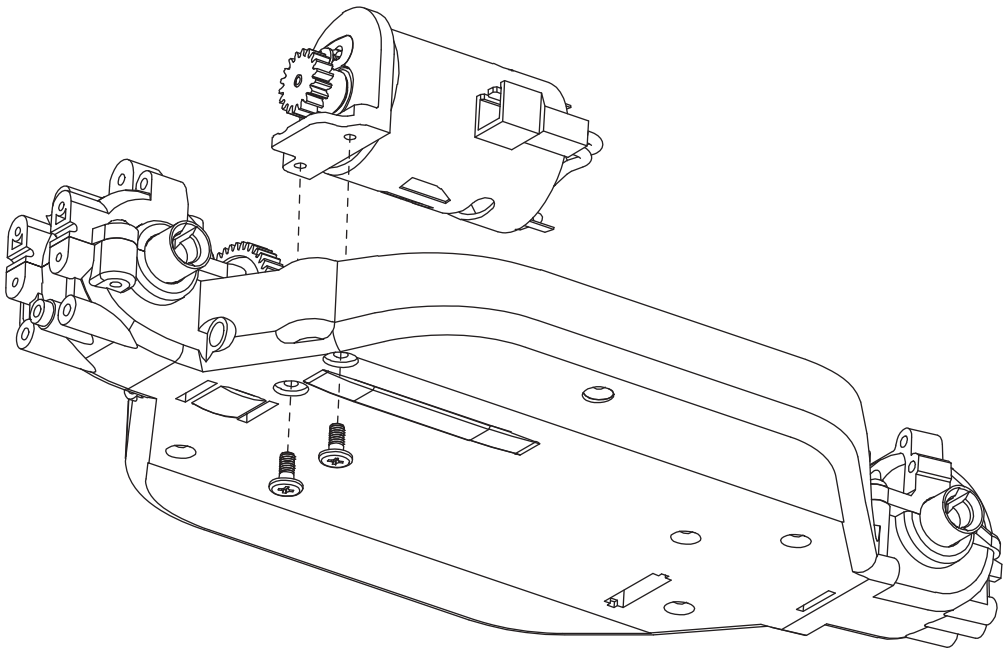
3mm Set Screw

20T Pinion



10

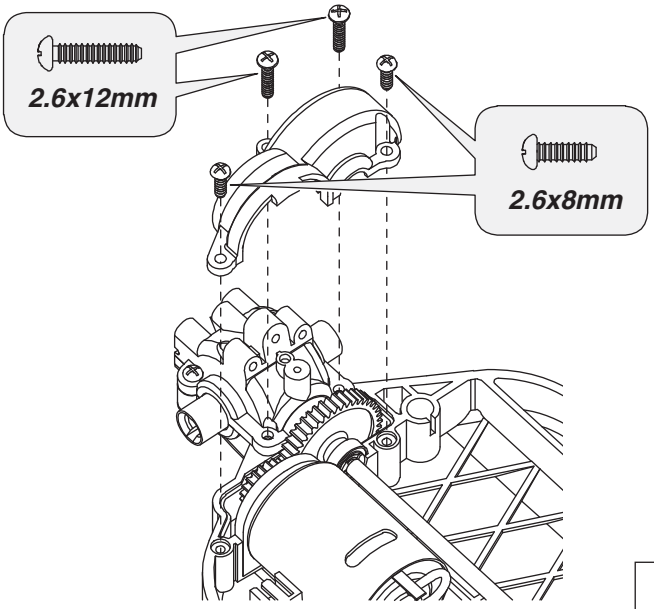
.....2
2.6x6mm Screw



11

.....2
2.6x8mm S/T Screw

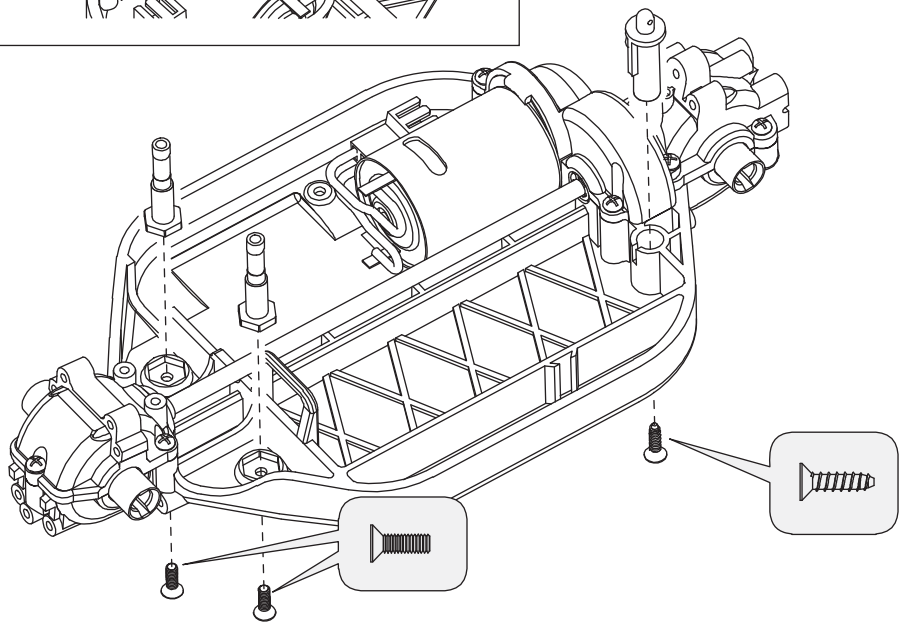
.....2
2.6x12mm S/T Screw



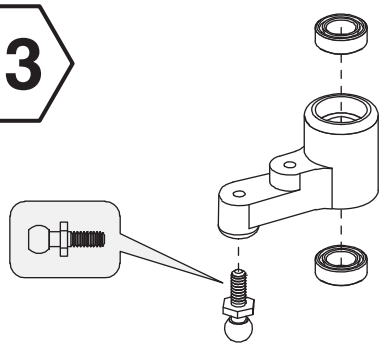
12

.....1
2.6x10mm
S/T F/H Screw

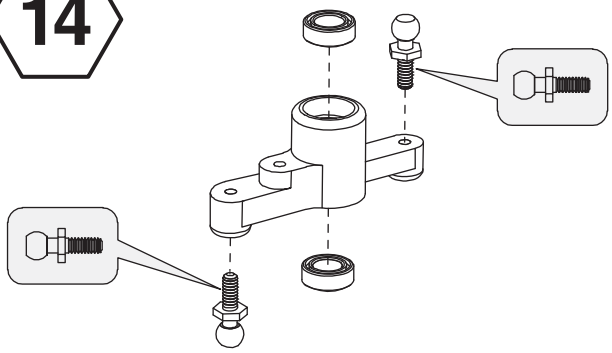
.....2
2.6x8mm F/H Screw



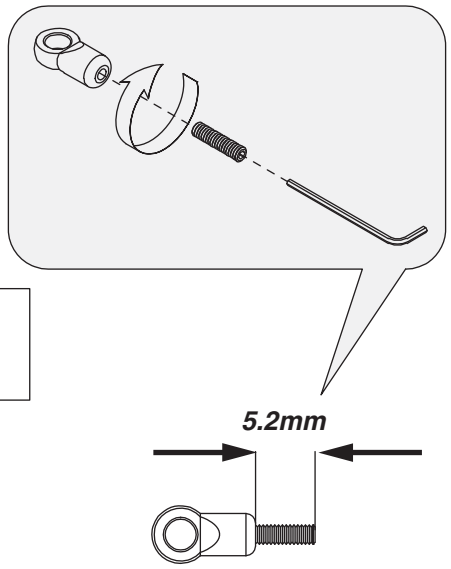
13



14

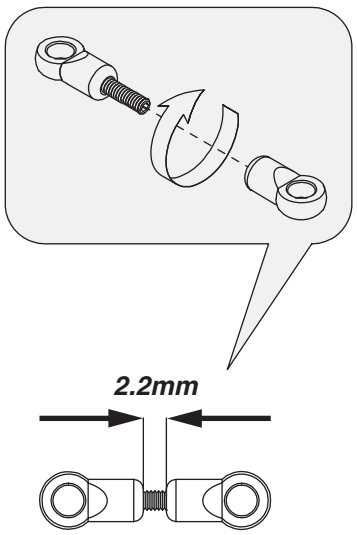


15

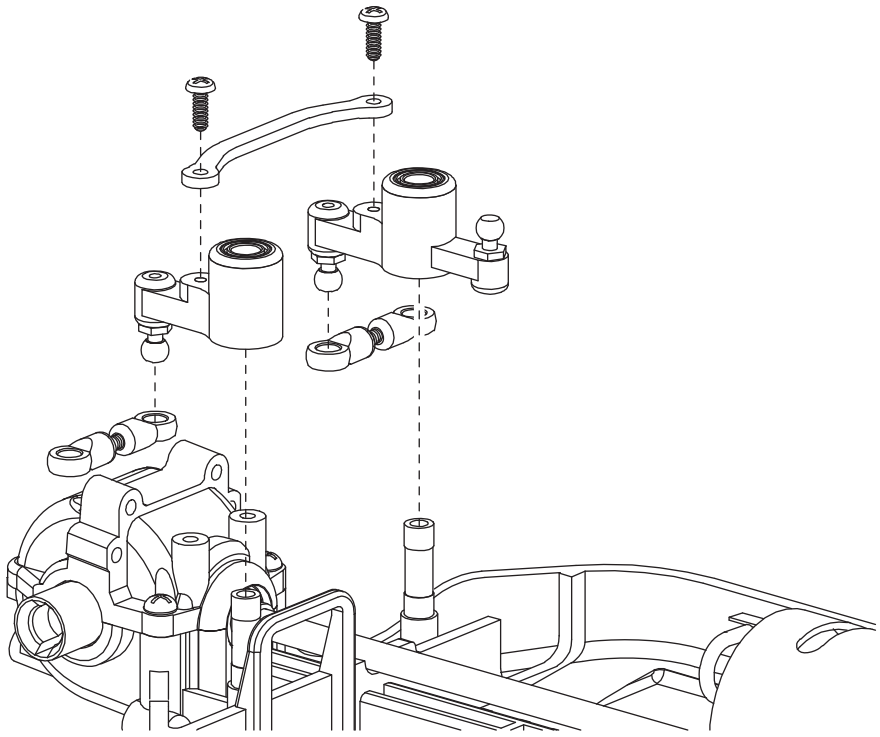


3x8mm
Set Screw

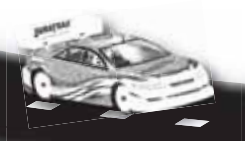
16



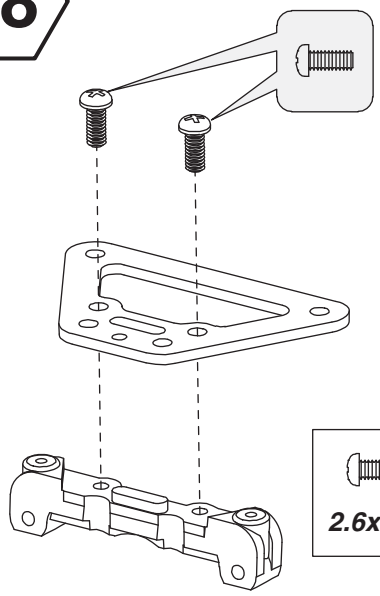
17



.....2
2x6mm S/T Screw

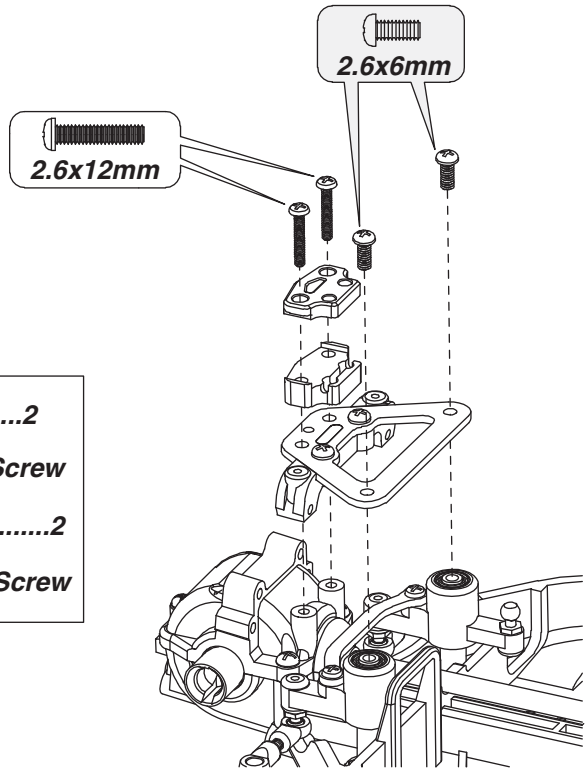


18



.....2
2.6x6mm Screw

19

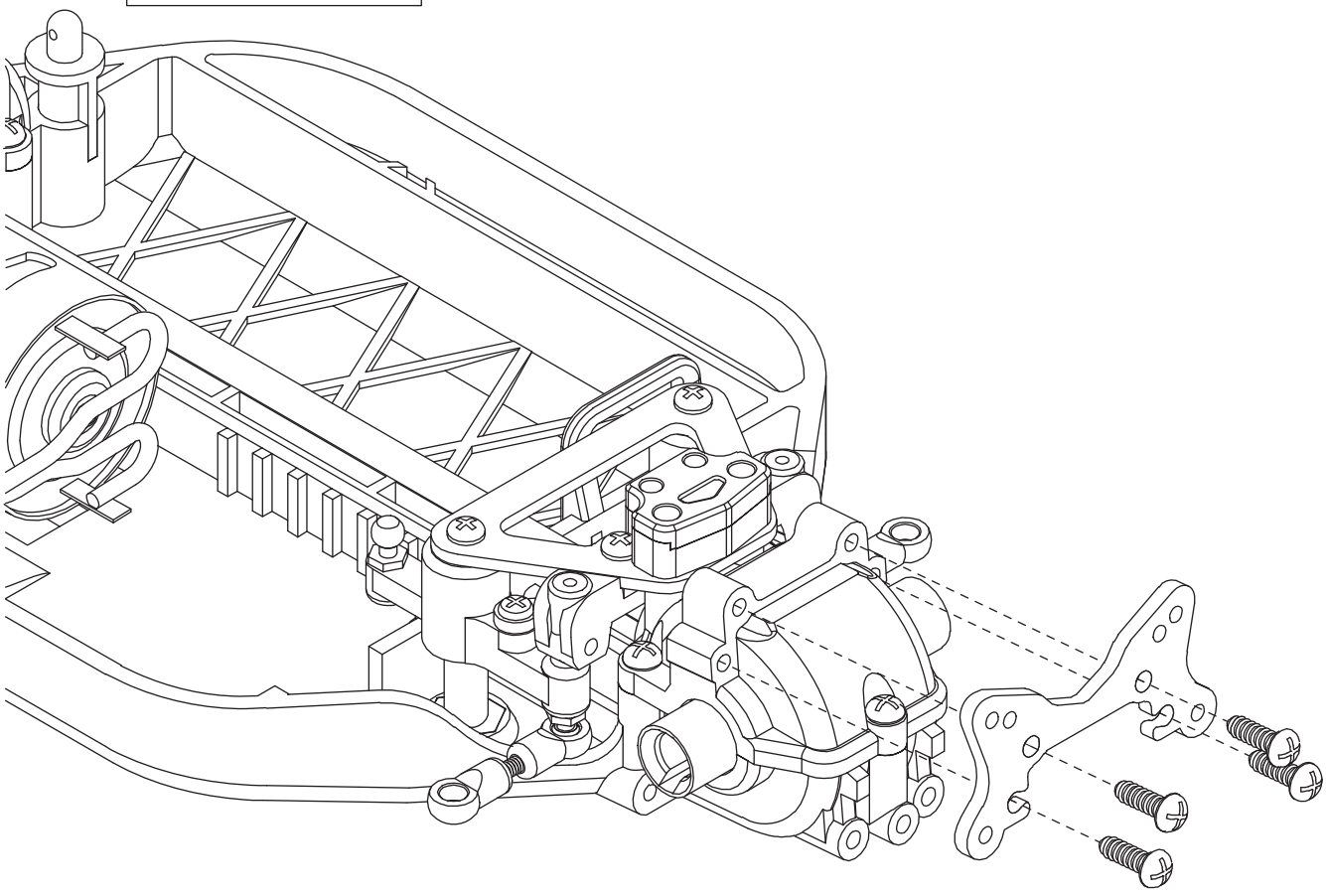


.....2
2.6x6mm Screw

.....2
2.6x12mm Screw

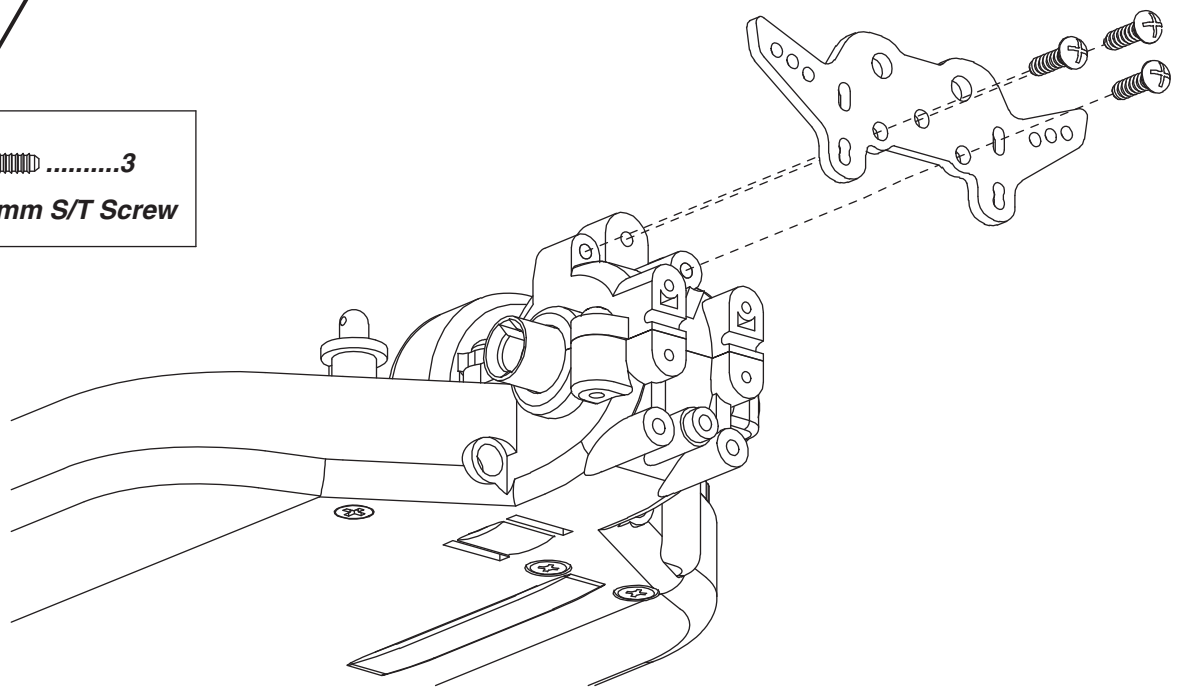
20

.....4
2.6x8mm S/T Screw



21

.....3
2.6x8mm S/T Screw

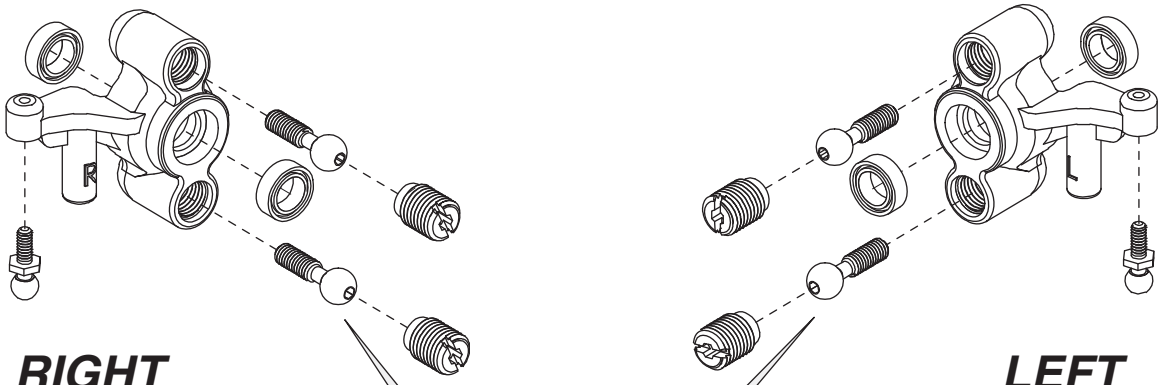


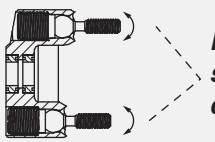
22

.....2
5x8mm Ball Bearing

23

.....2
5x8mm Ball Bearing

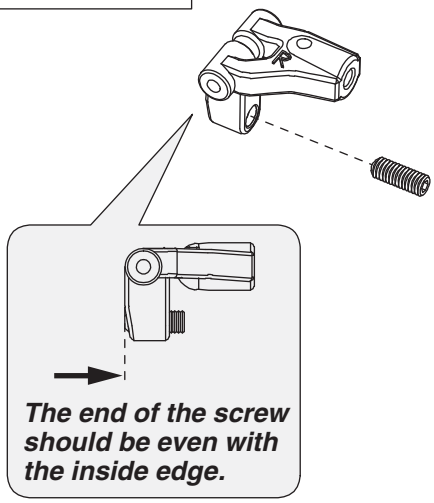




Pivot ball should move smoothly, but have no excess play.

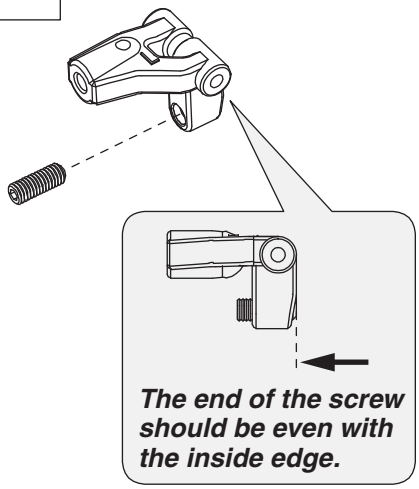
24 RIGHT

.....1
3x8mm Set Screw

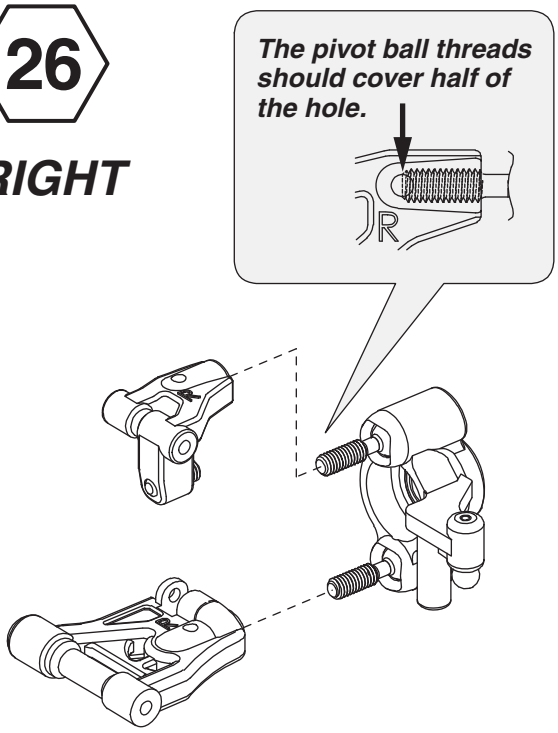


25 LEFT

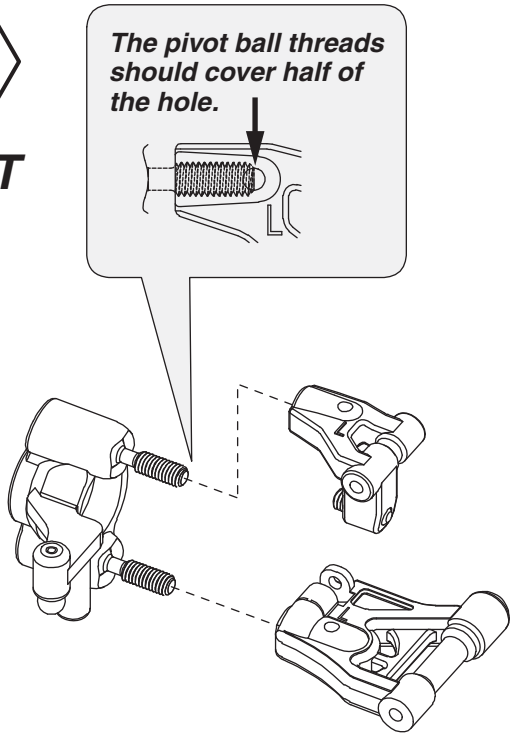
.....1
3x8mm Set Screw



26 RIGHT

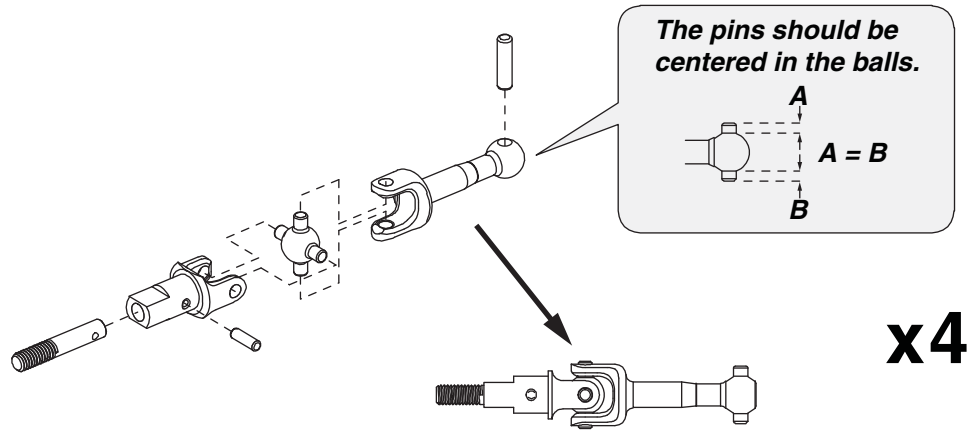


27 LEFT



28

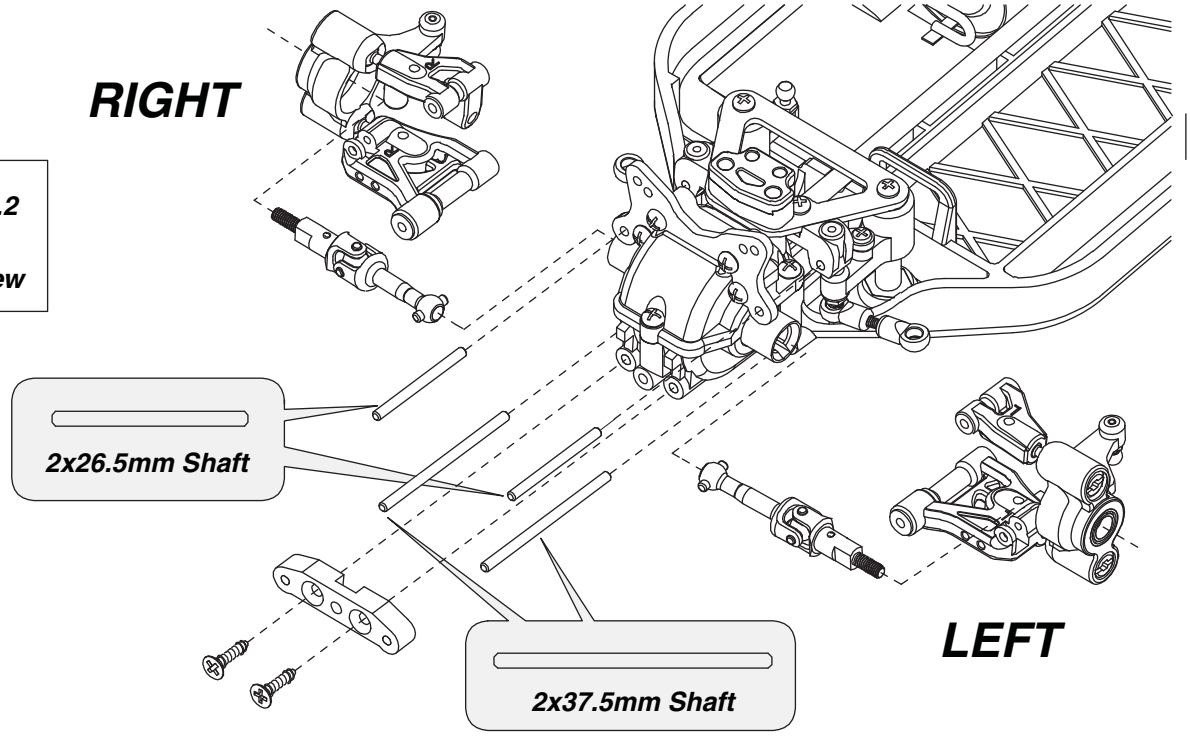
2mm Pin



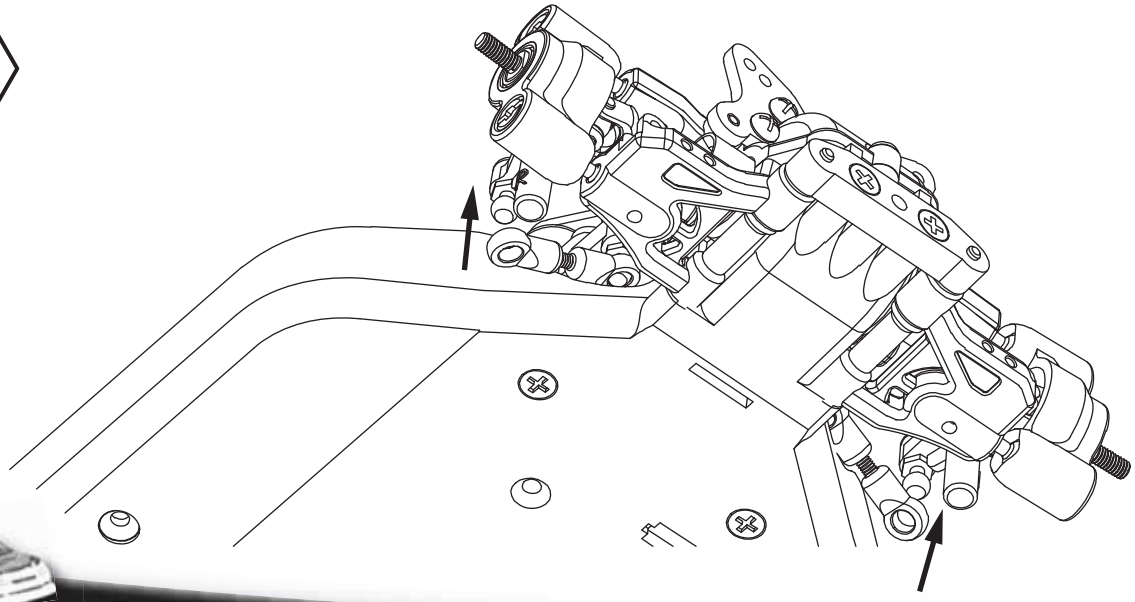
x4

29

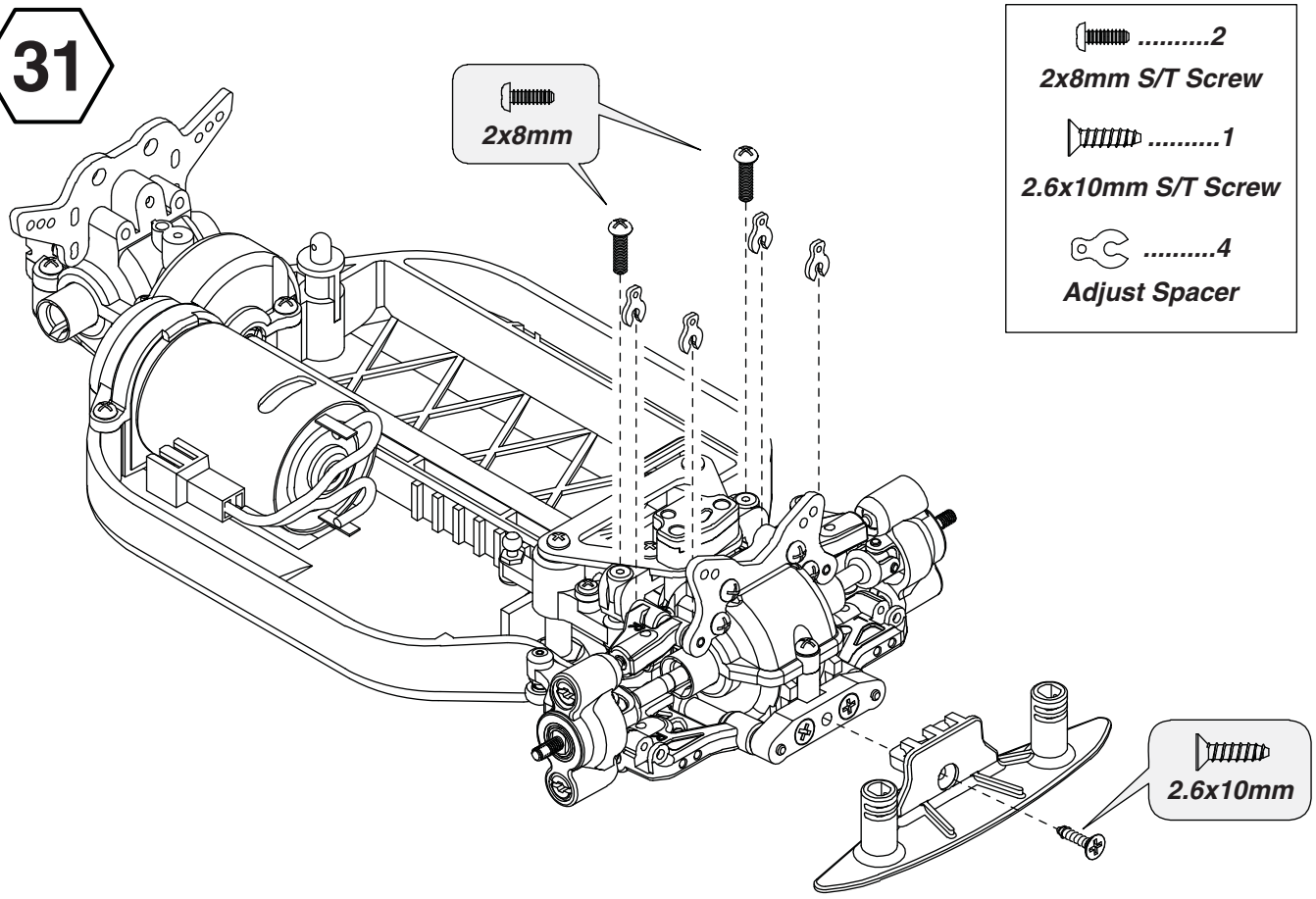
.....2
2.6x10mm
S/T F/H Screw



30

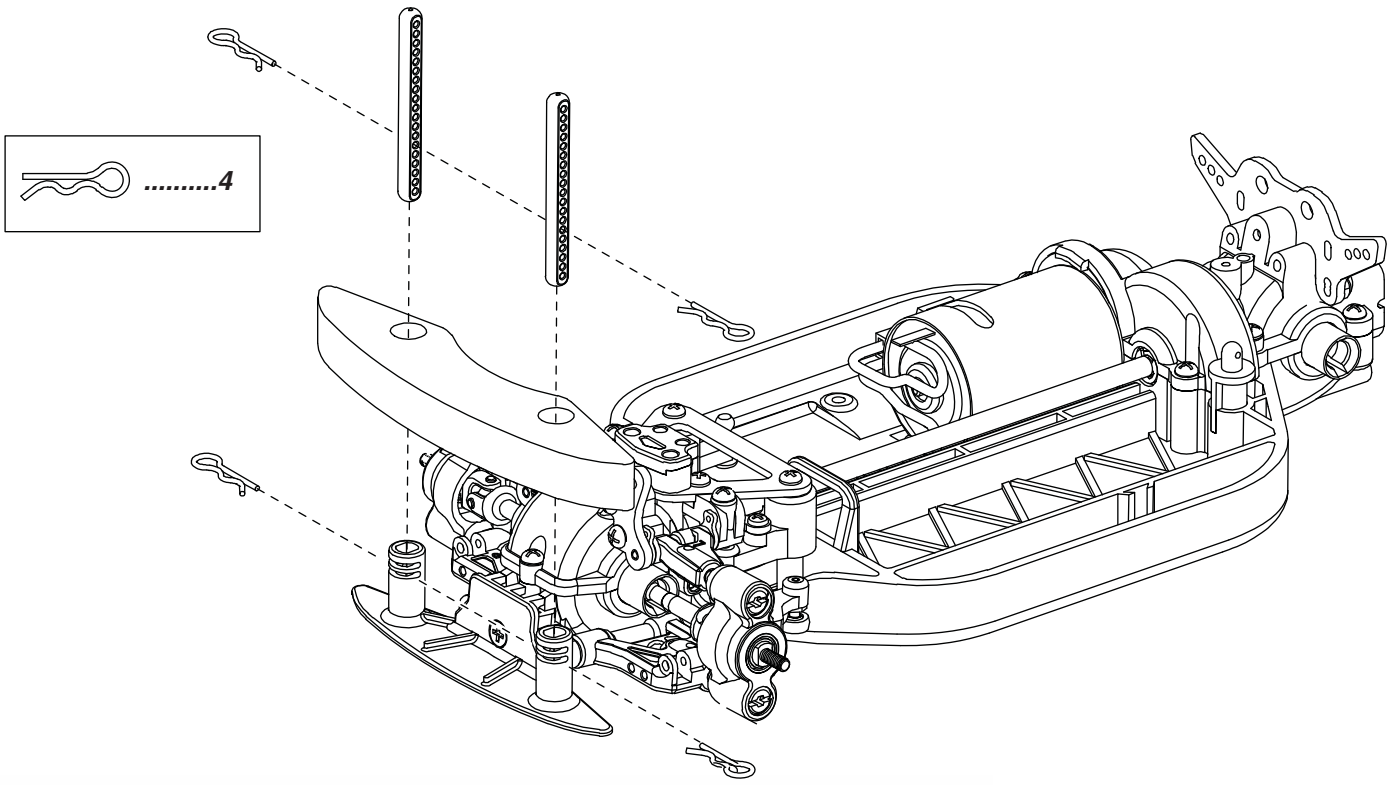


31

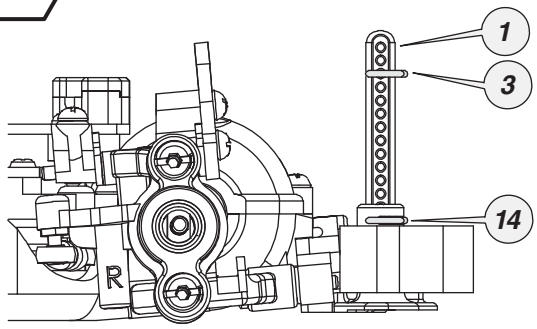


.....2	2x8mm S/T Screw
.....1	2.6x10mm S/T Screw
.....4	Adjust Spacer

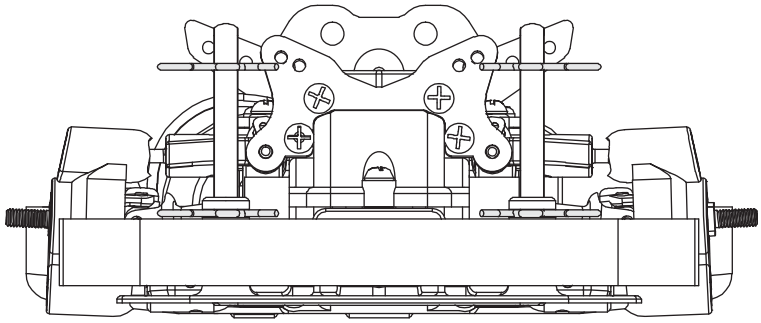
32



33



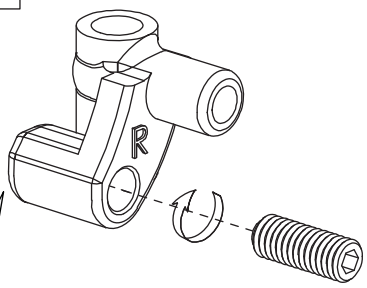
Insert body clips into the 3rd and 14th holes of the body posts. Adjust the post height for different bodies.

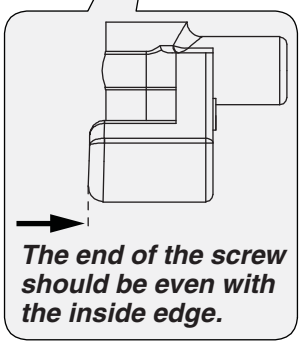


34

RIGHT

.....1
3x8mm Set Screw



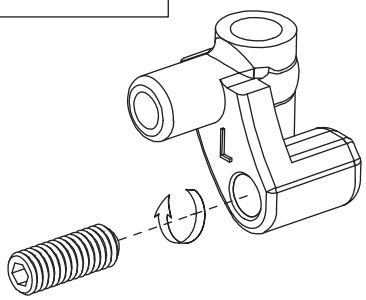


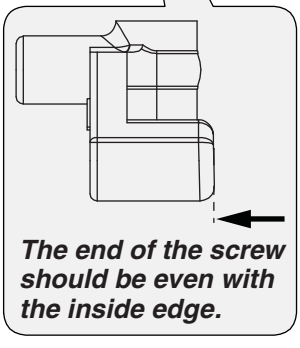
The end of the screw should be even with the inside edge.

35

LEFT

.....1
3x8mm Set Screw



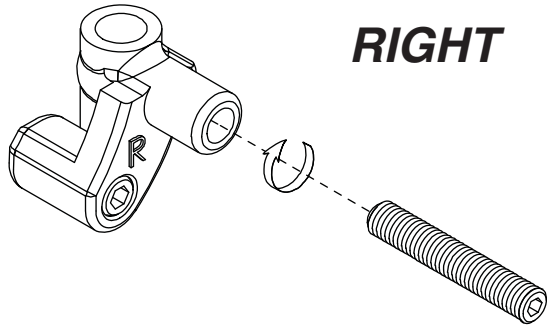


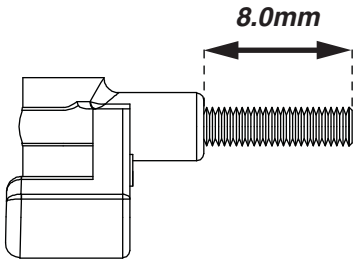
The end of the screw should be even with the inside edge.

36

.....1

3x12mm Set Screw

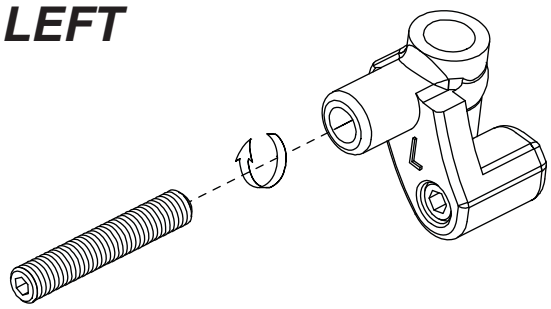


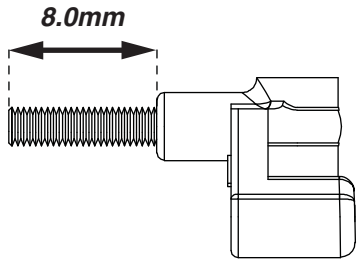


37

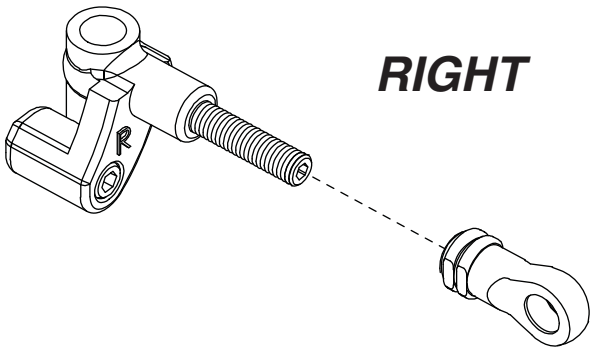
.....1

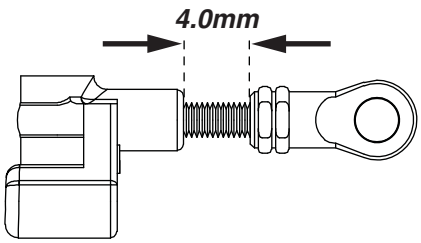
3x12mm Set Screw



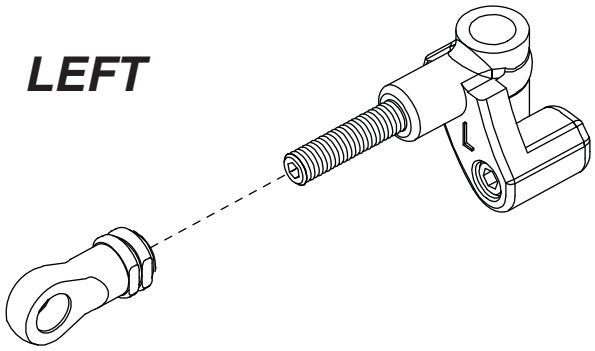


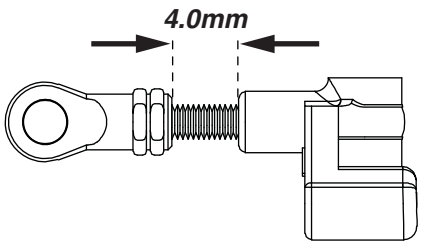
38





39





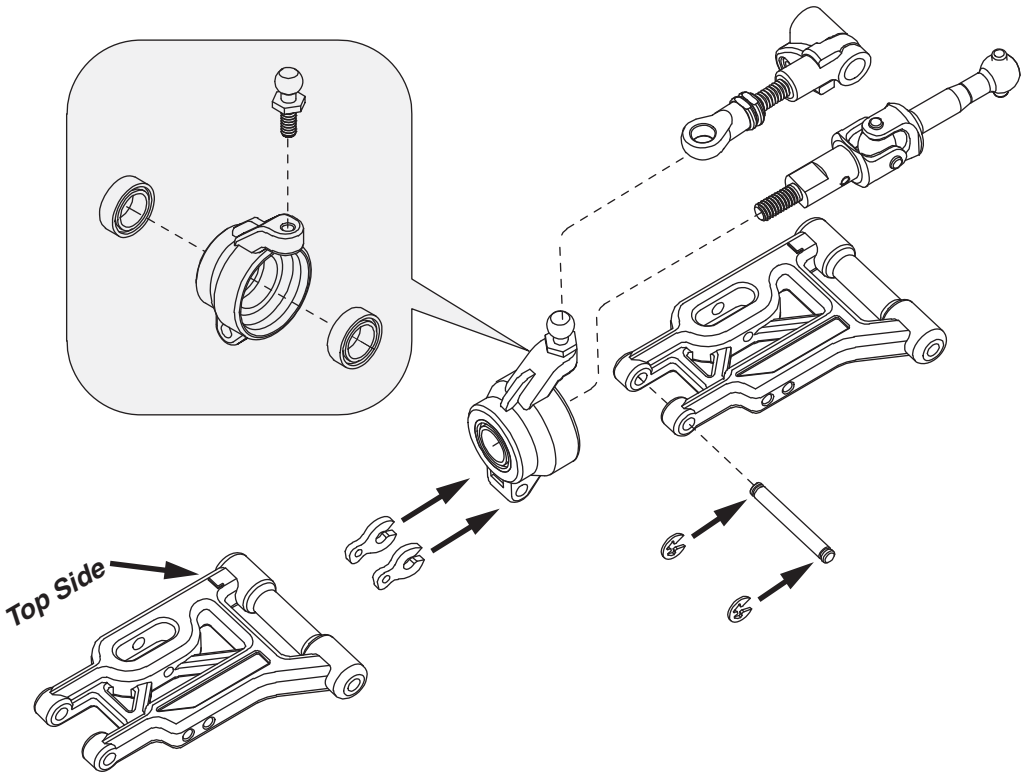
40 LEFT

.....2
5x8mm Ball Bearing

.....1
2x16.5mm Shaft

.....2
Adjust Spacer

.....2
1.5mm E-Clip



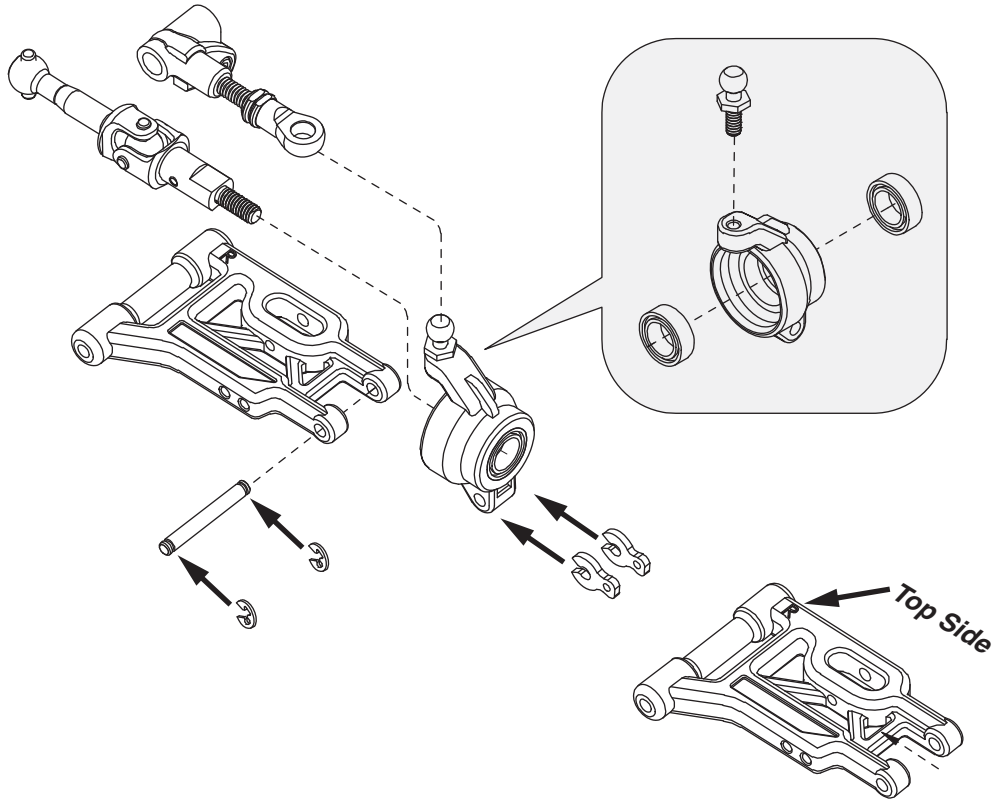
41 RIGHT

.....2
5x8mm Ball Bearing

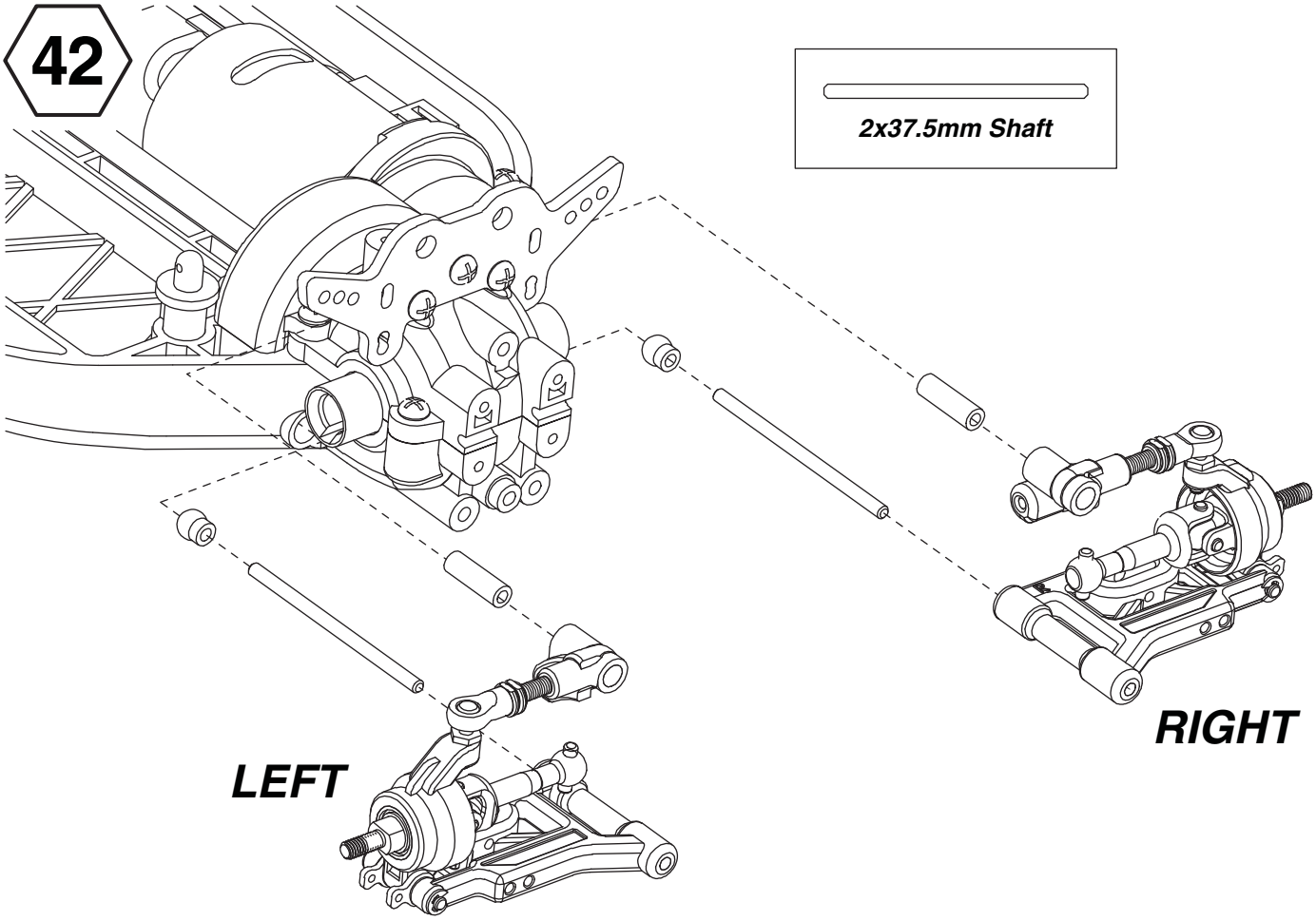
.....1
2x16.5mm Shaft

.....2
Adjust Spacer

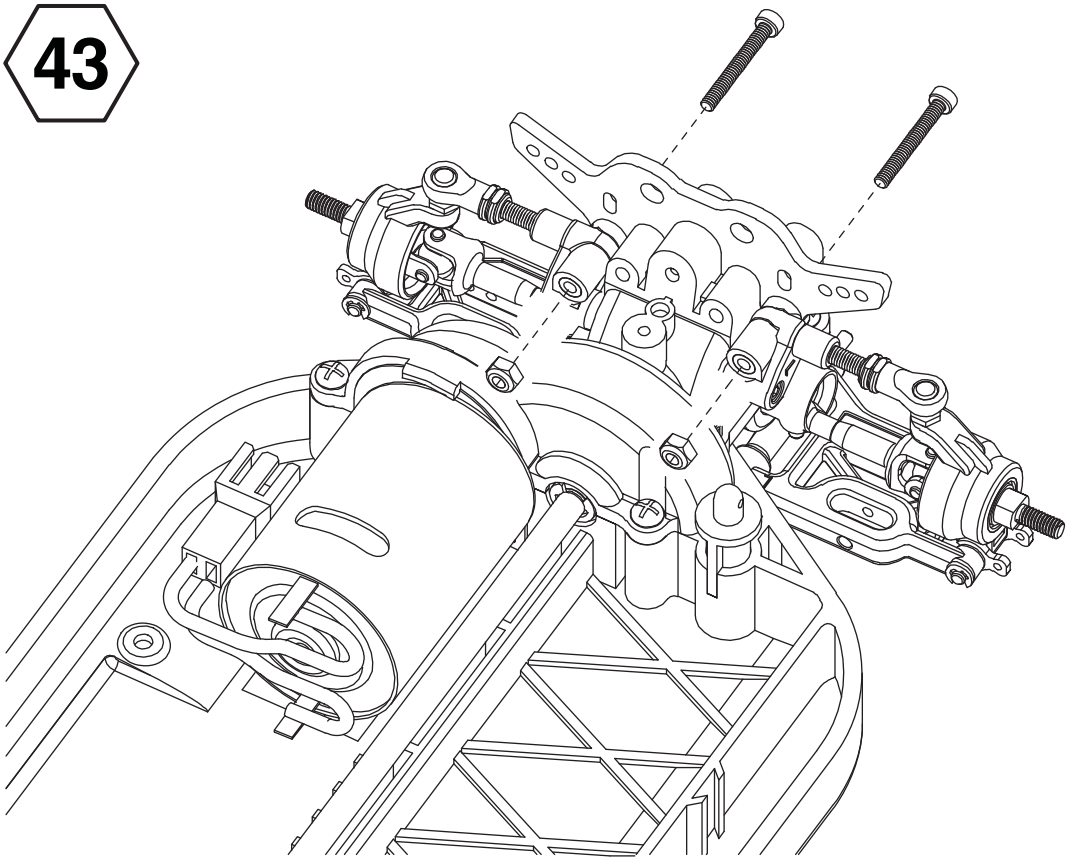
.....2
1.5mm E-Clip



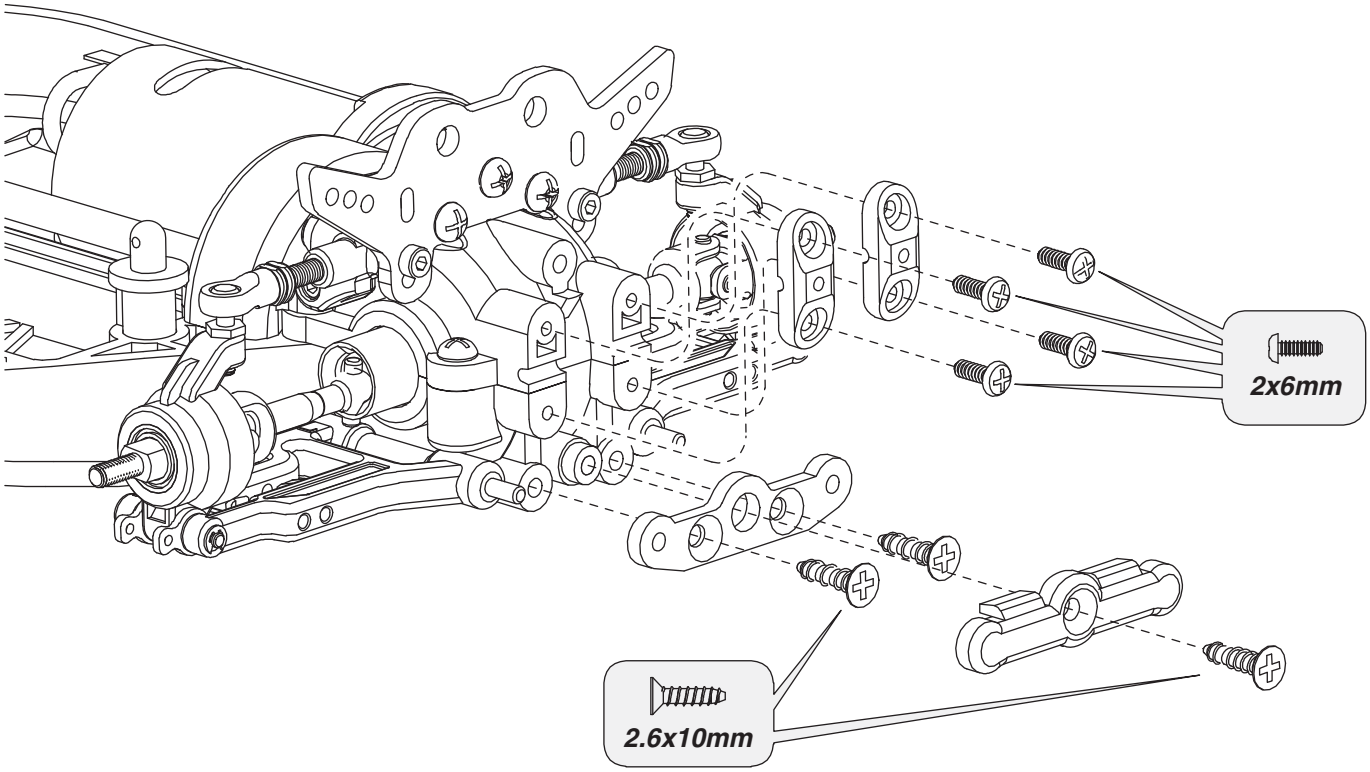
42



43



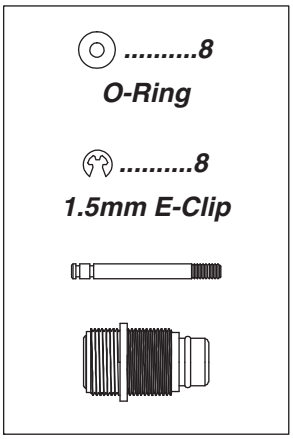
44

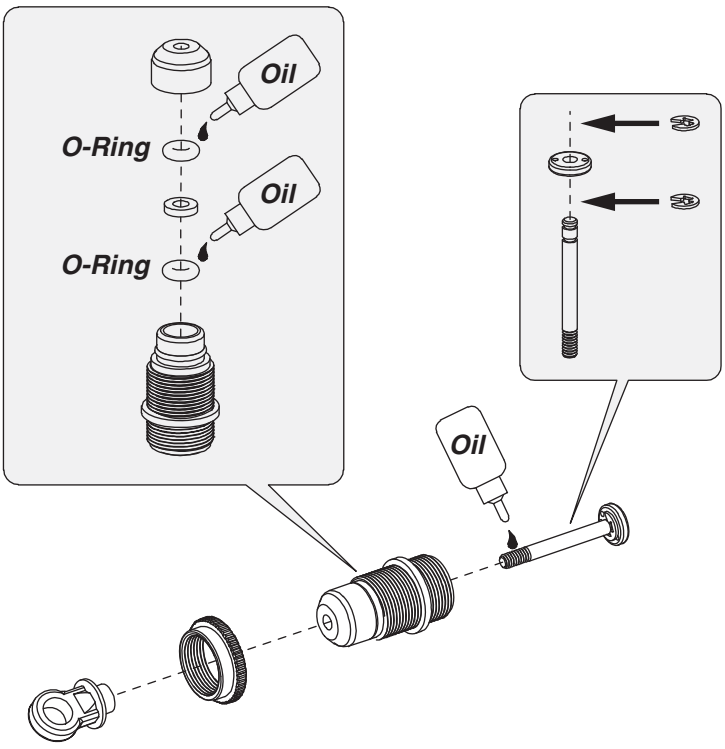


45

.....8
O-Ring

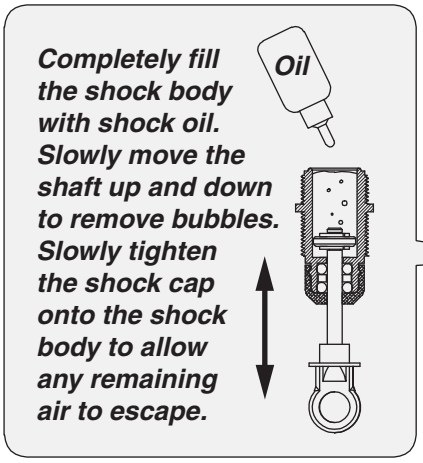
.....8
1.5mm E-Clip





46

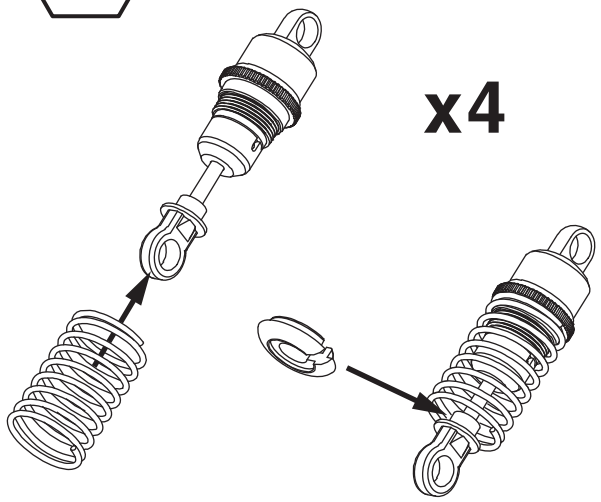
x4



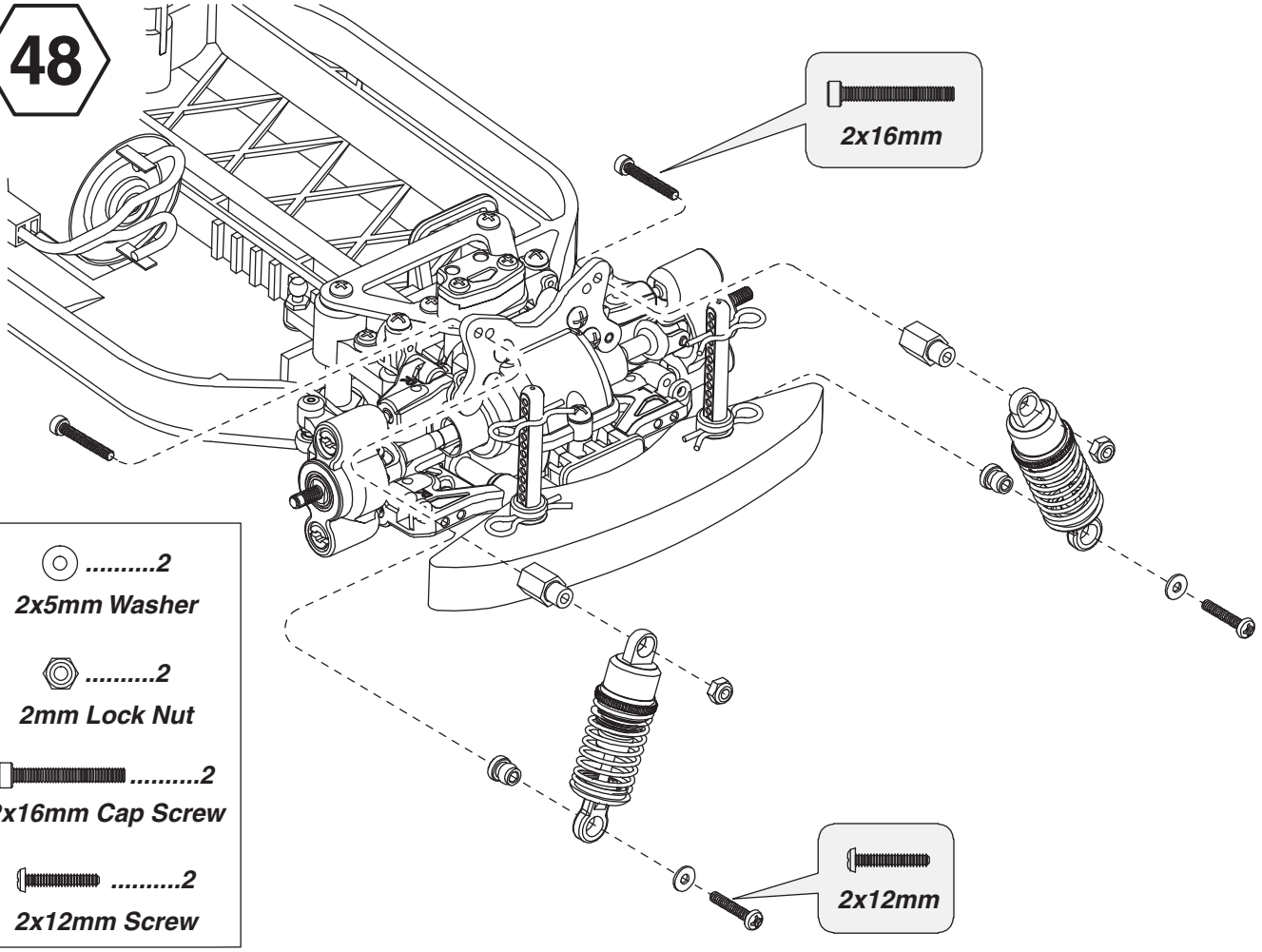
Completely fill the shock body with shock oil. Slowly move the shaft up and down to remove bubbles. Slowly tighten the shock cap onto the shock body to allow any remaining air to escape.

47

x4

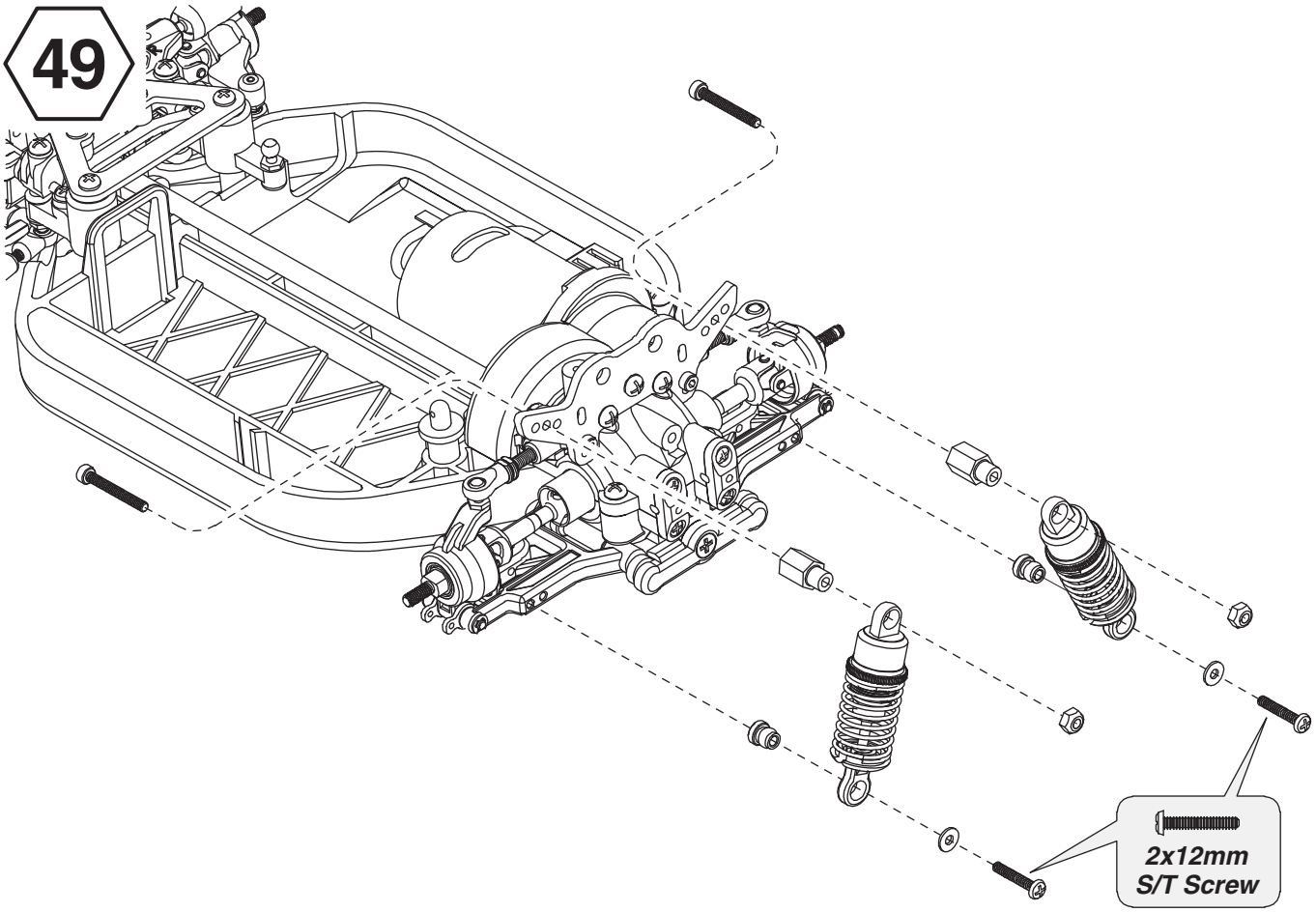


48

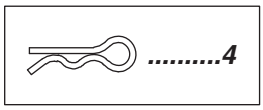


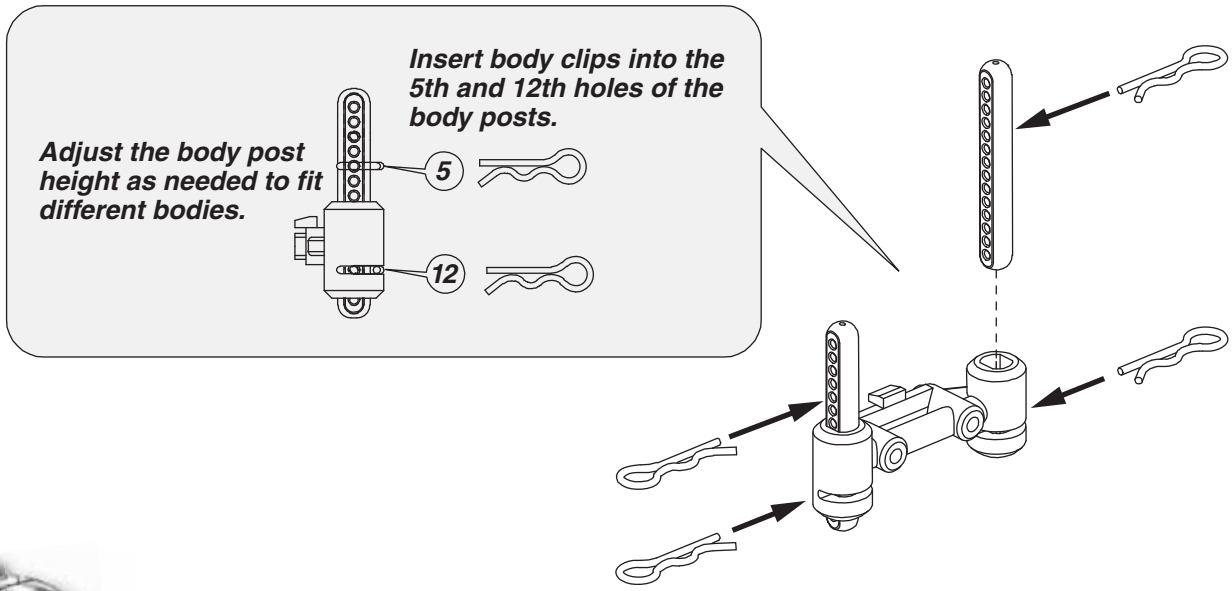
.....2	2x5mm Washer
.....2	2mm Lock Nut
.....2	2x16mm Cap Screw
.....2	2x12mm Screw

49

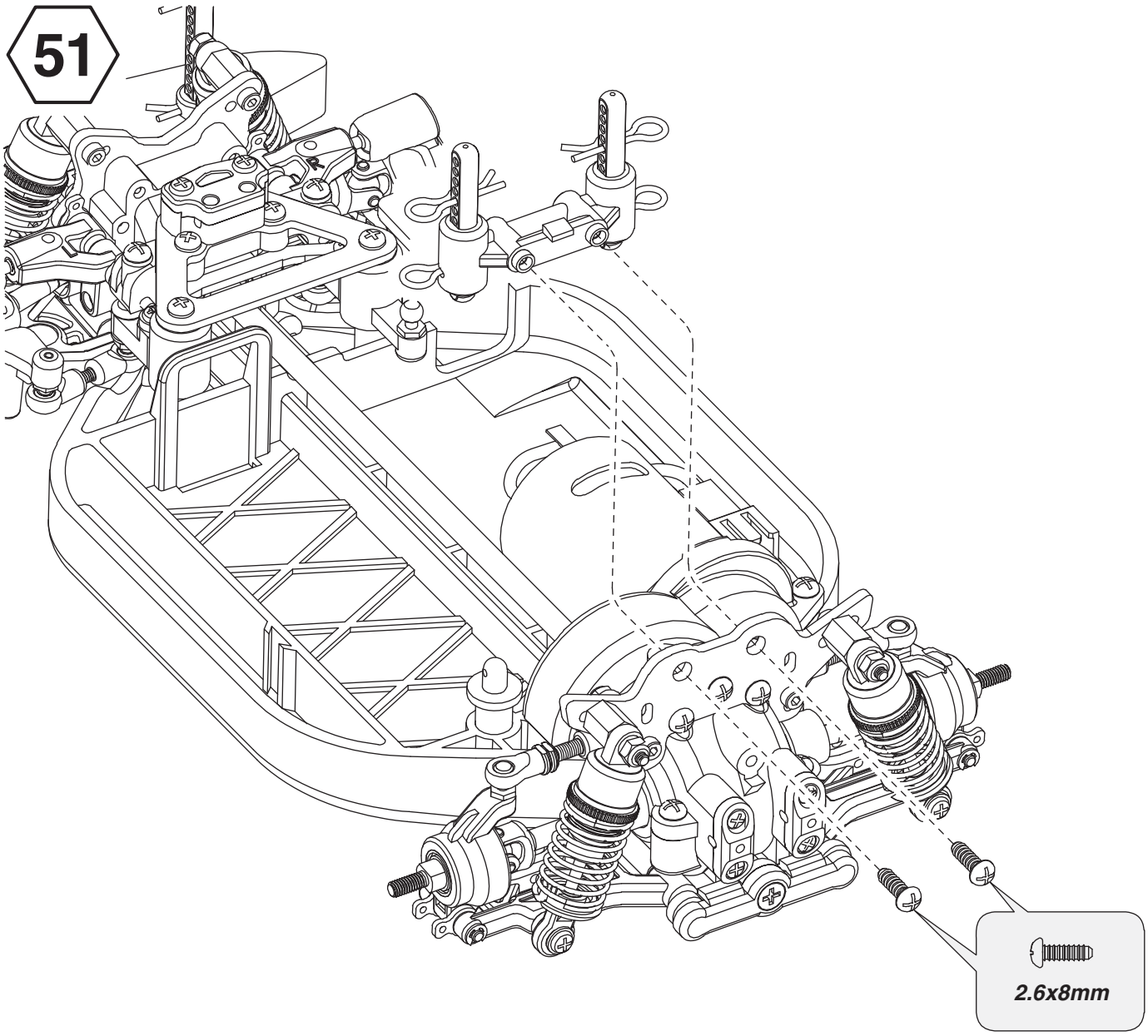

2x12mm
S/T Screw

50


.....4

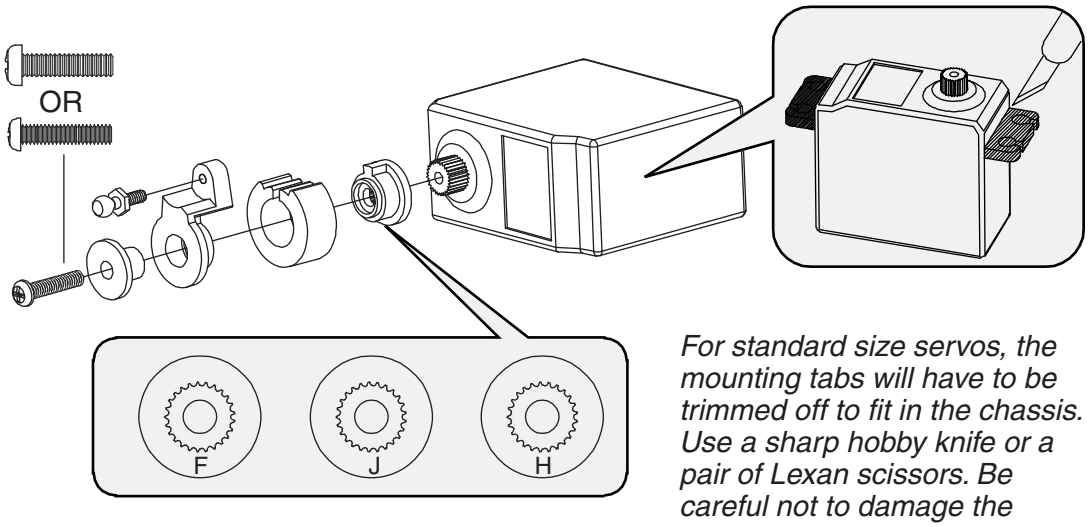

Insert body clips into the 5th and 12th holes of the body posts.
Adjust the body post height as needed to fit different bodies.
5
12

51



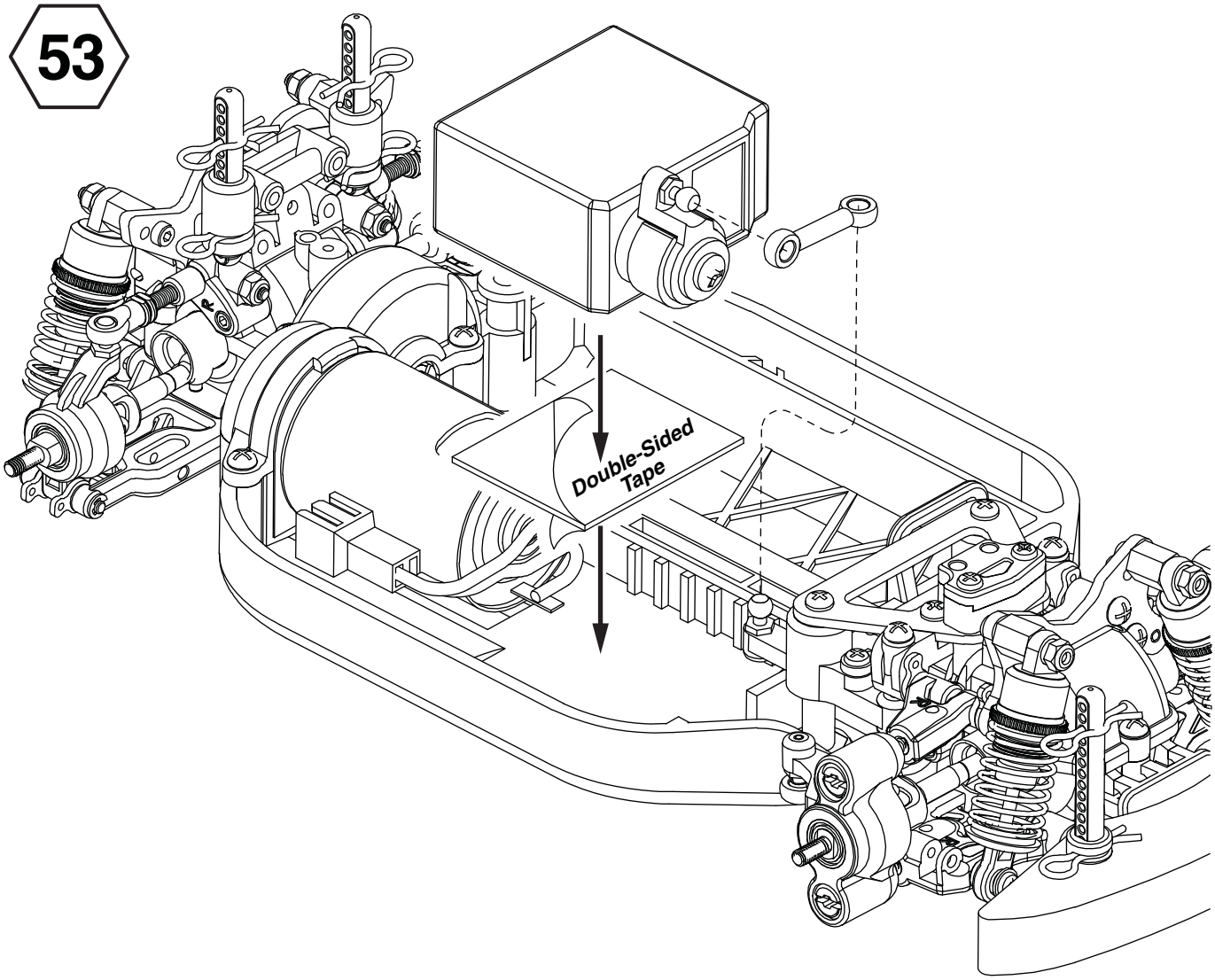
52

.....1
3x12mm Screw
.....1
2.6x12mm Screw
.....1

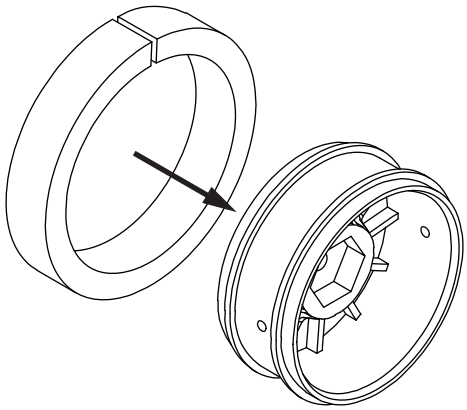


For standard size servos, the mounting tabs will have to be trimmed off to fit in the chassis. Use a sharp hobby knife or a pair of Lexan scissors. Be careful not to damage the servo case.

53

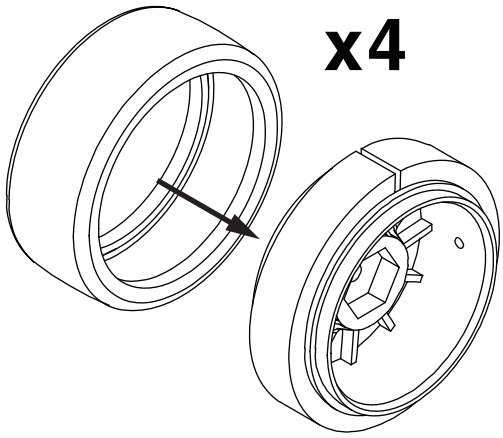


54

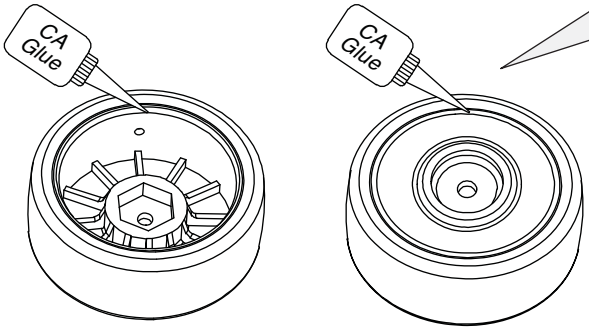


55

x4



56

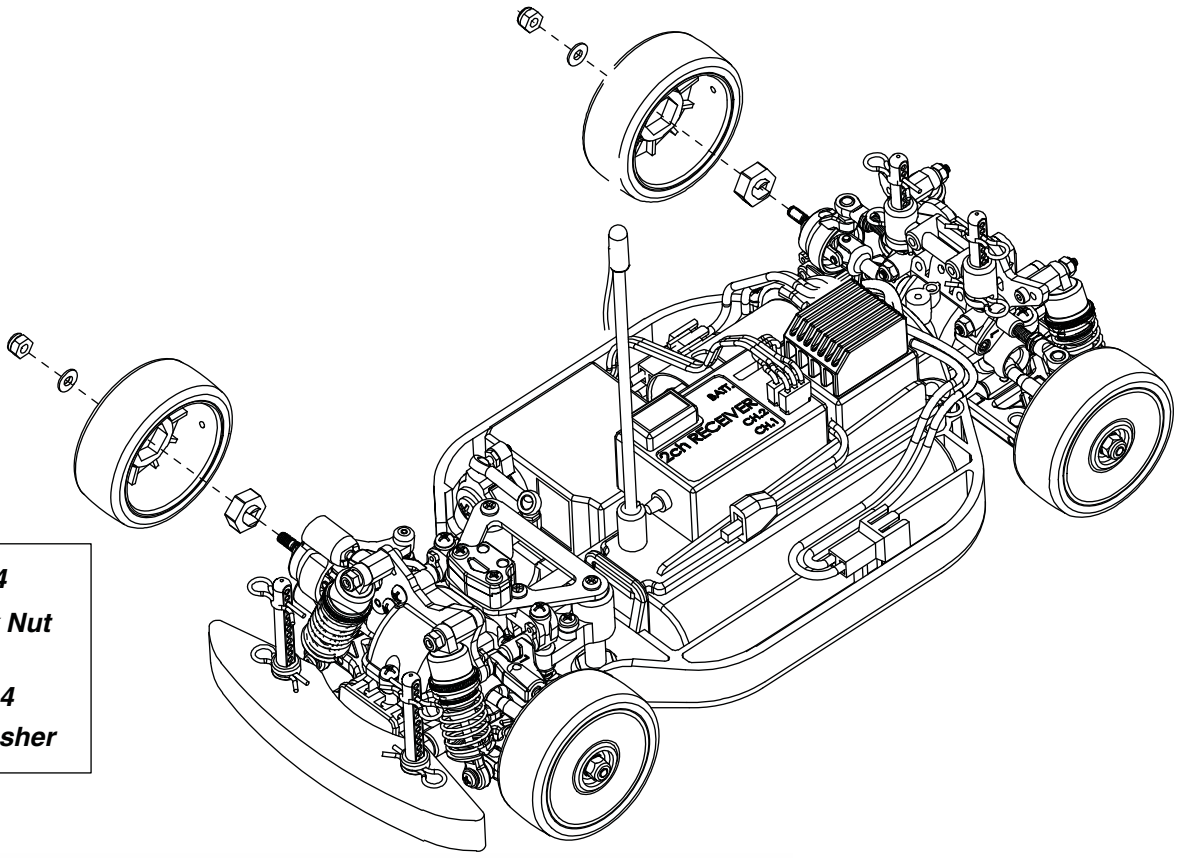


Add CA glue to the inside contact area of the rim and tire.

Caution: Don't overflow the glue over the tire surface.

TIP: Pull the tire away from the rim slightly. Work your way around and don't use too much glue. Wipe off excess with a paper towel. Use a small rubber band to hold the tire until the glue is dry.

57

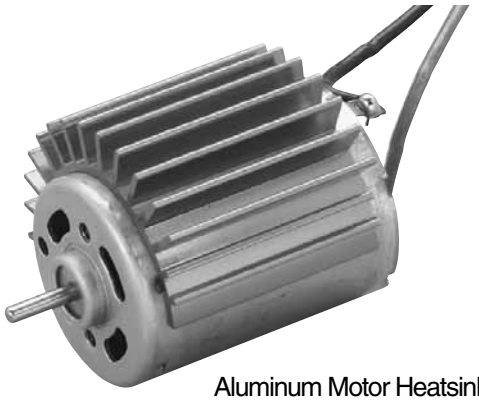


.....4
2.6mm Lock Nut

.....4
2.6x6mm Washer

OTHER ITEMS AVAILABLE FOR THE VENDETTA TC

Graphite Steering Servo Hold-Down Set
DTXC8813



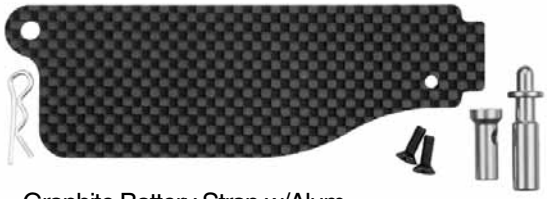
Aluminum Motor Heatsink (Blue)
DTXC8279

Graphite Front Brace
DTXC6599

Ball Differential
DTXC7348

Aluminum Rear Hub (Blue)
DTXC8059

Graphite Steering Drag Link
DTXC7489

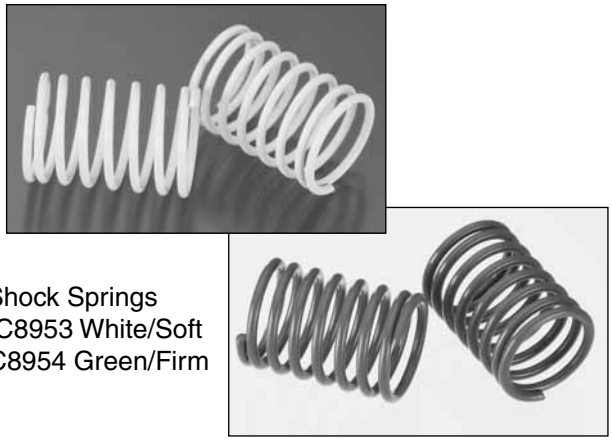


Graphite Battery Strap w/Alum
Post and Antenna Mount
DTXC6311

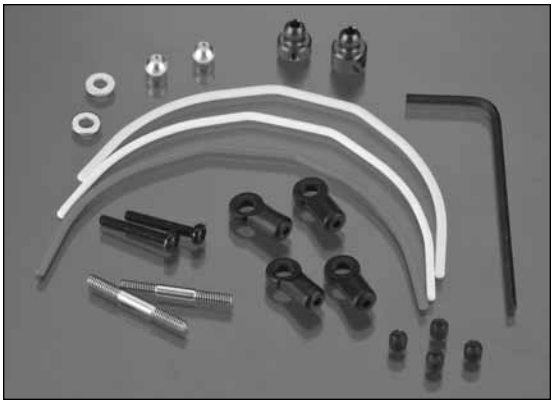
6-cell 1200 mAh NiMH Battery
DTXC2194

Onyx 220 Charger
DTXP4220

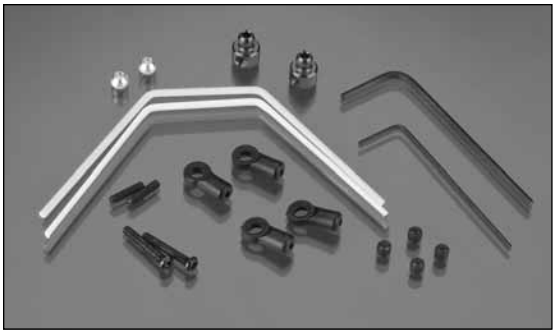
Aluminum Shock Blue (2)
DTXC8993



Shock Springs
DTXC8953 White/Soft
DTXC8954 Green/Firm



Front Sway Bar Set
DTXC9605



Rear Sway Bar Set
DTXC9606

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